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THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

66 PORTLAND PLACE LONDON W1 · TWO SHILLINGS AND SIXPENCE

Project for the A.B.S. Old People's Homes, East Horsley, Surrey. Architects: Clifford Culpin and Partner [F.A]. From a drawing by Tony Sergeant [A]

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THIRD SERIES VOLUME SIXTY-THREE NUMBER SEVEN TWO SHILLINGS AND SIXPENCE
66 PORTLAND PLACE LONDON W1 TELEPHONE LANGHAM 5721-7 TELEGRAMS: RIBAZO WESDO LONDON

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The New R.I.B.A. President

Mr. Kenneth M. B. Cross, M.A., is to be the new President for the session 1956–57. He succeeds Mr. C. H. Aslin, C.B.E., who retires from office on 30 June. Although the Council elections for next session have not yet taken place, Mr. Cross's nomination to the presidency is unopposed.

Mr. Cross was born in 1890 and educated at Felsted School and Caius College, Cambridge. He received his architectural training in articles to his father, Alfred W. S. Cross [*F*], and at the Cambridge University School of Architecture, setting up in private practice in 1919 and entering into partnership with his father in 1922.

He has undertaken architectural work for the following: Westminster City Council, Marylebone, Fulham, Finsbury and Deptford Borough Councils, Morecambe and Heysham Council, Bournemouth Council, Newcastle upon Tyne City Council, Epsom Borough Council, Finchley Urban District Council, Islington Borough Council, The Barbers Company, The Grocers Company, The Whitgift Foundation, St. John's College, Cambridge, London Hospital, Commercial Bakery, Plymouth, Café Premises, Plymouth, Barclays Bank, Park Lane, W.1.

Mr. Cross has also been responsible for other industrial, domestic and collegiate building and is a leading authority on the design and construction of swimming pools. In this connection he has published *Swimming Baths* (1928) and *Modern Public Baths* (1938). His other publications include *Practical Notes for Architectural Draughtsmen* (1927) and contributions to the technical press.

Mr. Cross has served on the R.I.B.A. Council for the Session 1937–38 and since 1950. He was Honorary Secretary of the Royal Institute from 1952–55 and in July 1955 was appointed a Vice-President. He has also served on committees of the Royal Institute and the Board of Architectural Education as follows: Executive Committee (from 1952), Chairman of the Board of Architectural Education (1950–52), Chairman of the Competitions Committee (1937–49), Practice Committee, Professional Conduct Committee, the Committee set up to study the Report of the working team on the Building Industry and the Anglo-U.S. Productivity Team.

Mr. Cross was Chairman of the Committee on the Constitution of the Council and also of the Committee on the Registration Acts. He has acted as arbitrator in building disputes and was an assessor for the following competitions: Romford Town Hall, Leeds Central Baths, Holborn Baths.

Mr. Cross is unmarried. His recreations are walking and gardening.

Earl Attlee K.G.

It was announced just after the April issue of the JOURNAL had gone to press that Earl Attlee [*Hon. F*] had been appointed a Knight of the Garter.

Associate of the Royal Academy

Mr. Marshall Sisson, F.S.A. [*F*], has been elected an Associate of the Royal Academy.

A.B.S. Competition

All the designs submitted for the A.B.S. Homes Trust competition for Old People's Dwellings on a site at East Horsley, including the winning design by Clifford Culpin [*F*] assisted by Tony Sargeant [*A*] and Brian Robson [*A*], were exhibited at the Building Centre during April.

Commenting on the conditions, the MANCHESTER GUARDIAN said: 'These injunctions provoked several designs for what appeared to be early Victorian slums; some to be executed in concrete with flat roofs that looked more suitable for swimming-bath attendants; some in suburban Georgian style; some reminiscent of roadhouse Tudor with heavy eaves; and some merely mad.'

The assessors, Mr. H. S. Goodhart-Rendel, C.B.E. [*F*], Mr. A. W. Kenyon, C.B.E., M.T.P.I. [*F*], and Mr. G. Grenfell Baines, A.M.T.P.I. [*A*], congratulated the A.B.S. Building Committee on the high standard of the 1st, 2nd, 3rd and commended designs of some of the others submitted.

The winning design is illustrated and described on pages 292, 293, 294, of this JOURNAL.

The Board of Building Education

The third meeting of the Board of Building Education, the establishment of which was announced in the JOURNAL of June last year, was held at the Institute of Builders on 26 April. The meeting was preceded by a luncheon at which members of the Board met informally the new chairman, Sir E. Graham Savage, C.B., who has succeeded Mr. F. Leslie Wallis, O.B.E., J.P.

The main business of the meeting was the approval of the final draft of 'Notes upon Education in England and Wales with special reference to the Building Industry', which has been prepared as a basis for the future work of the Board. It was decided that an appropriate chapter on education in Scotland be included in this document which it is hoped will shortly be available in published form.

It was felt that the Board should assume immediate responsibility for ensuring that publicity be given through interested individuals and organisations to the scope existing in building as a career for suitable entrants. This applied especially to openings in the higher executive and managerial grades of the industry. It was decided to appoint committees of study to examine and make recommendations on the field of building education at all levels, relating these facilities and the man-power available to the needs of the industry.

The Board have received a letter of goodwill from the Minister of Education expressing his interest in their activities. Gifts to the Board from members of the London Master Builders' Association have already amounted to £3,500 and support has been promised from the regional Federations of Building Trades Employers.

The R.I.B.A. representative on the Board is Mr. R. E. Enthoven [*F*].

Nottingham, Derby and Lincoln Society of Architects

At their Annual Meeting the Nottingham, Derby and Lincoln Society of Architects elected as Honorary Members Mr. C. D. Spragg, C.B.E., Secretary R.I.B.A., Mr. W. L. Dunn, F.C.A., Secretary of the Society, and Miss D. D. Moss, Assistant Secretary of the Society.

Vacational Employment of Students

Members are once again reminded of the Institute's yearly scheme for helping students to obtain temporary employment in architects' offices during the summer vacation. Members willing to co-operate in the scheme should notify the Secretary without delay, giving particulars under the following headings: (*a*) period for which employment is offered, (*b*) number of students that can be employed during the period, and (*c*) a range of remuneration.

Information on the Use of Materials

Following on the suggestion made at the Torquay Conference that closer relations should be maintained between the profession and the various industries, the Science Committee appointed an Industry Liaison Sub-Committee which has arranged a series of meetings with the major building industries. The next joint meeting will be with the asbestos cement industry and if any member has any experiences arising out of the use of asbestos cement, or proposals for development work which might be useful to the Sub-Committee in their discussion, he is asked to write to the Secretary, R.I.B.A.

Building Industry Exhibition at Wigan

The President, Mr. C. H. Aslin, C.B.E., opened on 8 May an exhibition at Wigan Technical College. The exhibition was an important part of an 'open week,' sponsored by the Ministry of Works, and was a co-operative effort of several bodies connected with the building industry. Its purpose was to widen the knowledge of those already in the industry, to interest those who wish to enter the industry and to acquaint the general public with new trends in building. Craft competitions were held and visitors to the Technical College were able to see classes in progress. Other open weeks are to be held in technical colleges throughout the country. Two have been already fixed at Stoke Technical College (20–30 June) and Falkirk Technical College (14–21 September).

Nuclear Power and Off-Peak Electricity

With nuclear power, heat may well be wasted because of an insufficient night time load on the generating stations. The best way to secure night time load is to encourage the off-peak heating of buildings by thermal storage. This was said at a recent conference by Mr. J. W. Moule of the South of Scotland Electricity Board. He went on to say that there were three methods of storage of heat by off-peak electricity—the electrode boiler (the R.I.B.A. building employs this method), block heaters of concrete and fireclay which could be plugged into 13 or 15 amp. socket outlets and floor warming by embedded electric cables. Unfortunately the block storage heater could not at present be installed in domestic premises. It had been developed for industrial and commercial buildings and as such was sold free of purchase tax. Experience in offices had shown that it could be used successfully in the home and representations had been made to the Treasury to secure its wider application. Floor warming by electricity was one of the outstanding space heating developments of recent years and possessed great future possibilities.

Building Statistics

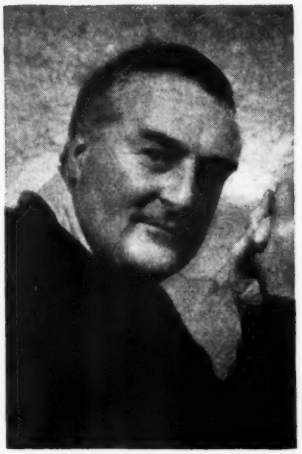
The Ministry of Works Annual Return of Labour and Output was sent out in the middle of April to 110,000 or so firms engaged on building and civil engineering including specialist firms. The form, which had to be completed by 2 May, is designed to obtain information on the number of men employed and value of work carried out in the first quarter of this year.

The annual return is additional to the quarterly returns made by a selected number of firms and is to check the reliability of this sampling method. The statistics obtained from this inquiry will be published in the Digest of Statistics, provisional figures being given in June and final figures some months later in the year.

It is essential for the Government to have this information on an industry whose output now approaches £40,000,000 a week, so as to see how far its load is becoming more in balance with its capacity, and to ensure more work coming forward when it is needed.

The Ministry therefore asked for the co-operation of all the building firms concerned in making the return accurately and promptly.

The New President of the A.A.



Mr. Gontran Iceton Goulden, T.D. [*A*], has been elected unopposed as President of the Architectural Association for 1956–57. Mr. Goulden has been Chief Technical Officer and Deputy Director of the Building Centre since 1947. He is 44 years of age. He was educated at St. Edmund's School, Canterbury, in Paris and at the Bartlett School of Architecture, whose Diploma he was awarded in 1936. He was Surveyor to the Wellcome Archaeological Research Expedition to the Near East in 1934–35, after which he joined the staff of Norman and Dawbarn. After the war he joined the training staff of the A.A. School and in 1946–47 was in practice with Sir Hugh Casson and the late Christopher Nicholson.

Since 1949 Mr. Goulden has been a member of the Council of the A.A., being Hon. Secretary in 1952–54 and Vice-President 1954–56. He has been a Council member of the A.R.C.U.K., is on the U.K. Committee of the I.U.A., the Franco-British Union of Architects, the British Building Documentation Committee and the Council of the Modular Society and from 1950 to 1953 was Hon. Secretary of the MARS Group. He is a governor of St. Edmund's School, Canterbury, and of St. Margaret's School, Bushey, and is an Hereditary Freeman of the City of Canterbury.

Before, during and since the last war he has served in the Territorial Army as a gunner. In 1936 he was commissioned as Captain and served during the war in Ceylon, India and S.E.A.C., being twice mentioned in despatches. From 1947 to 1953 he commanded No. 452 H.A.A. Regt. From 1953 to 1955 he was Deputy Anti-Aircraft Defence Commander, London North. He was promoted Lt.-Col. in 1947, Brevet Col. in 1953 and Colonel in 1954. Since 1955 he has been Col. attached to H.Q. A.A. Brigade. He holds the Territorial Decoration and three clasps.

His architectural work includes several houses (with Sir Hugh Casson) and the reconstruction of the building now occupied by the Building Centre. He states that his recreations are architectural and gastronomical travel, gardening and sailing. He is married and has two sons and a daughter.

Comments on Government Research programmes

The R.I.B.A. is invited annually to comment on the programme, prepared by the Ministry of Works, of building research projects to be undertaken or continued during the coming year.

The task of preparing comments is normally entrusted by the Council to the Science Committee and it would help the Committee very considerably if members would suggest fields in which they consider that research might usefully be started *or intensified.*

All suggestions for research would accordingly be welcomed. They should be addressed to the Secretary, R.I.B.A.

Ventilation of Internal Bathrooms

The Building Research Station is anxious to find opportunities to observe examples of the installation of internal ventilating systems. Members having knowledge of cases suitable for examination are asked to contact the Secretary, R.I.B.A.

Einar Forseth Exhibition

The stir created in the early 1920's by Stockholm City Hall was to a great extent due to the brilliant way in which its architect Ragnar Östberg had employed artists to decorate his building. The masterpiece was the Golden Room, a monumental mosaic hall by Einar Forseth, specially summoned home from this country for the purpose.

An exhibition of designs for this great work was held at the A.A. in 1929, and the current exhibition at the Building Centre consists of a few of these studies, some examples of stained glass and gold mosaics and a number of cartoons for windows, tapestries and other drawings which together give some idea of Forseth's range and mastery.

Like all great artists, he continues to develop, and his latest experiments in stained glass—brilliant pieces of hewn glass set in concrete—invite attention from modern architects. Like Rouault, Einar Forseth understands stained glass, having worked in this medium since 1917 when he was 24; and this exhibition, coming at a time when the Royal College of Art is designing for the new Coventry Cathedral and Mr. John Piper has done windows for Oundle School Chapel, should further the popularity of stained glass and mosaics.

The exhibition, which closes this Friday the 25 May, was formally opened by H.E. The Swedish Ambassador in the presence of the artist, to whom he paid a very high tribute. Sir Howard Robertson, M.C., A.R.A., Past-President, R.I.B.A., moving a vote of thanks to the Ambassador, referred to the continuing happy relationship between Sweden and the Building Centre, which was represented by its Chairman, Sir Alfred Hurst, and Director, Mr. Frank Yerbury, O.B.E. [*Hon. A*].

Report of the Joint Committee on Tendering Procedure

In response to numerous requests this report, which was out of print, has now been reprinted. Copies may be obtained from the Secretary, R.I.B.A., 66 Portland Place, W.1. A remittance of 6*d.* per copy, plus 3*d.* postage, should be sent with applications.

Facilities for Telephones in New Buildings

A booklet on this subject was published by the G.P.O. in 1931, and since then there have of course been changes in building technique and types of components. The subject was brought to the notice of the Institute by a member and it was referred to the Science Committee who in 1953 set up a sub-committee to confer with the Post Office engineers to consider the need for a revised edition and the form it should take.

As a result of this friendly and helpful collaboration a revised edition of the booklet, under the same title, has now been published, with a foreword by the President, Mr. C. H. Aslin, who commends it to all concerned with the design and erection of modern buildings.

Telephone managers will shortly, as far as possible, be issuing it free to all architects in their areas.

R.I.B.A. Diary

TUESDAY 22 MAY–WEDNESDAY 30 MAY inclusive. Hemel Hempstead New Town Exhibition. Monday to Friday 10 a.m.–7 p.m. Saturday 10 a.m.–5 p.m.

MONDAY 28 MAY. 6 p.m. Library Group Meeting. Mr. H. V. Molesworth Roberts to introduce an evening on the work of John Dando Sedding.

WEDNESDAY 30 MAY–SATURDAY 2 JUNE inclusive. British Architects' Conference at Norwich.

TUESDAY 19 JUNE. 6 p.m. General Meeting. Council Election Results. *Modern Church Design*—Basil Spence, O.B.E. [*F*].

Presentation of the Royal Gold Medal to Dr. Walter Gropius at the R.I.B.A. 10 April 1956

Mr. C. H. ASLIN, C.B.E., President R.I.B.A., in the Chair

The President: I think that if Dr. Gropius had any fear that the occasion on which he came here to receive the Royal Gold Medal might be a solitary one, that fear has been dispelled by the very large audience this evening. I am sure it must give him great pleasure to find that he is looked upon as a great person not only by the leaders of the profession but also by the youngsters.

I do not propose to say anything about Dr. Gropius, partly because everybody knows all about him and partly because we have with us half a dozen people who have known Dr. Gropius at various stages of his life and who are going to address us. I will therefore only express our delight at having Dr. Gropius here amongst us and assure him that this is no mere formal occasion but one which indicates our regard for a great man in architecture.

Sir Herbert Read, D.S.O., M.C., Litt.D., M.A.: To-day we honour a man who has created the most significant symbol of our time and who has himself become a symbol. We call him an architect and we confer on him our highest award, but he has given a new and a deeper meaning to architecture and it is to that aspect of his achievement that I, who am no architect, may perhaps be allowed to draw your attention.

The symbol created by Dr. Gropius is the Bauhaus, a German word which he has made an international word. When, immediately after the first world war, Gropius was invited to become Director of the Academy of Fine Art in Weimar, he accepted the appointment but crossed out the word 'Academy' and substituted this new word 'Bauhaus'. It means literally 'the House of Building', but the word 'Bau' in German has a sense and a resonance which the English word 'building' does not convey. It is a very primitive, archetypal word, with roots in the soil. A 'Bauer' is a builder, but a 'Bauer' is also a peasant or farmer, and from the first conception of the Bauhaus there was present in the idea this organic connection between building and the soil, between man and the earth, between tillage and structure.

'The Bauhaus', said another great contemporary architect, Mies van der Rohe, 'was not an institution with a clear programme; it was an idea, and Gropius formulated this idea with great precision.' But Gropius's method of formulating an idea has not been the usual one; he has written comparatively little. The idea of a Bauhaus had to be built, built not only with physical materials like steel and cement but with human material in the form of teachers and pupils, with families and communities. It is the demonstration of a totally new way of life.

We have only to look at the first syllabus of the new school, drawn up by Dr. Gropius in 1919, to see that from the first there was a master mind at work and that the architect as universal man (a concept dormant since the Renaissance) had been born again.

Keenly sensitive to the new aesthetic ideals that were everywhere germinating around him and dominated by a feeling for the organic unity of life unfolding in every visible aspect of man's productive activity, Gropius gathered together in Weimar a group of young artists of unique capability. Some of them, like Wassily Kandinsky and Paul Klee, were to become leading artists of our time; others, like Joseph Albers and Moholy-Nagy, were to become great teachers in schools established on the model of the Bauhaus; still others, like Marcel Breuer and Herbert Bayer, were to become famous exemplars of the Bauhaus idea in architecture and design. But all were directed and inspired by the genius of Gropius himself, and all have from time to time paid generous tribute to his personality and influence.

The Bauhaus was an idea, we say; but it was more than that. It was a new way of life, a new vision. Dr. Gropius himself has said that 'the object of the Bauhaus was not to propagate any "style", system, dogma, formula or vogue, but simply to exert a revitalising influence on design'. He did not base his teaching on any preconceived idea of form but 'sought the vital spark of life behind life's ever-changing forms. The Bauhaus was the first institution in the world to dare to embody this principle in a definite curriculum.'

What is there so revolutionary in such a principle? Simply this: that for centuries our schools and academies have based their teaching not on 'life's ever-changing forms' but on a body of knowledge that we can call eclecticism, a system of rules and precepts derived from the rational analysis of the artefacts of the past, works and monuments that were alive centuries ago but that are now passionless and irrelevant.

That greatest of all Germans, Goethe, with whom Gropius has an innate affinity, told us always to remember that that which is formed by Nature is straightway transformed again and that 'if we would to some degree arrive at a living intuition of Nature we must on our own part remain for ever mobile and plastic, according to her own example'. 'For ever mobile and plastic'—that is the idea embodied in the Bauhaus and that is the idea embodied in the life work of Walter Gropius. He has destroyed for ever the old idea of a static dogma. He has destroyed for ever the old idea of separate arts pursuing their own discordant aims. He has destroyed for ever the unnatural divorce of art and society.

The Bauhaus idea, conceived forty years ago, established by heroic strife and labour, at the cost of persecution and exile, is now the faith of every vital artist in the world. For this reason, if for no other, we honour Walter Gropius.

Professor Sir William Holford, M.A., M.T.P.I., F.I.L.A. [*F*]: My brief contribution on this occasion shall be a tribute to Walter Gropius as a teacher, a teacher of what he himself described, and what Sir Herbert Read also has really just described, as Total Architecture.

It happened that long after I had become a student of Dr. Gropius's by adoption—as who did not in the late 1920's?—and long after hearing him speak at a dinner in London (I think it was in 1937), I became for three short periods after the last war a colleague of his in the Graduate School of Design at Harvard. In 1952 I had the honour of collaborating with him in a programme at Harvard, teaching his students and, as always happens in a good school, learning a good deal from them as well as from him.

I suppose there are really three qualities which a teacher of architecture must have if his influence is to penetrate and also to endure. Other qualities he may have in addition, but these are indispensable. The first is to have ideas and to be able to communicate them; the second is the ability to convince students that what they are doing is immensely important and exciting and worth while; and the third is the kind of imagination that relates the part to the whole, that relates the detail of design to the broad composition and that relates the technical achievement to the vital movements of the time, or, as Sir Herbert Read has just called it, the organic unity of life.

These qualities are now and have been throughout his life the mark of Walter Gropius the teacher. Had it not been so, his students would long ago have found him out. For of all people the teacher has to be most completely proof against the battering, year after year, of new intelligences and new enthusiasms. It is something to have been a notable teacher, but it is something more to continue as a notable teacher and to be one still. If you doubt this, go to any architectural school in the United States or go to C.I.A.M. or go to meetings of architects in Brazil or China or Peru, and you will find a willingness to listen to what Walter Gropius has to say which must be the envy—and occasionally the despair—of other teachers in different parts of the world. Sometimes that willingness has expressed itself in imitation too thoughtless to be really flattering, but at the same time it has usually been sincere.

To stick to one's principles and yet continually to extend one's sympathies requires strength of mind and great humanity,

and I think it is wonderfully assisted by a gift which Walter Gropius shares with a number of other great teachers, such as Bertrand Russell and Albert Schweitzer—an unquenchable belief in the virtues of co-operation. It is not fortuitous that Gropius's present architectural practice is known as The Architects' Collaborative.

It is usual on these occasions for the male bird to wear the plumage, but may I close my tribute by saying that he would not wear it to such advantage without the industrious, loyal and loving care of his wife. I say this because many of us here have enjoyed their joint hospitality and would like to extend our congratulations and good wishes to Ilse Gropius on this occasion. You may remember once more the man who said that he honoured the Pilgrim Fathers but that his really unbounded admiration was for the Pilgrim Mothers, who endured all the hardships and perils faced by their husbands and had to put up with the Pilgrim Fathers as well.

Dr. Nikolaus Pevsner, C.B.E., Ph.D., M.A., F.S.A. [*Hon. A*]: When I asked myself why I could possibly have been invited to make these remarks today I could think of only one reason, namely, that I must have known Walter Gropius, even if ever so slightly, for a little longer time than the other speakers.

The first occasion on which I heard Walter Gropius's name was so unflattering for myself that I must recount the incident at this informal gathering. It was, I think, in 1922. I was studying the history of art at Leipzig University, and I was a sort of chairman or president of the students of art history. A fellow student of mine came to me and said: 'Mr. Pevsner'—we all called each other 'Mr.' there—'Gropius is at Leipzig. You must get him to talk to us.' I said: 'Of course I will; I will get going straight away', but the trouble was that I had never heard his name before. It was in 1922 and I was a history of art student and not an architectural student, but that still, I think, dates that moment and it shows the number of years that are likely to elapse between the great creative act and its becoming known even to a relatively small circle. In 1922, you must remember, Gropius had been at Weimar for three years, the three crucial years in which the principles and the programme of which you heard just now were developed, and we all regard them now as the chief contribution of the twentieth century to art education. In 1922 also Gropius's building at Alfeld, not very far from Hanover, had been up for over ten years, and it is admitted now by everybody to be one of the prototypes of the 20th-century style in architecture.

I do not want to go this evening into the historical question. I think it can safely be assumed now that it is an established fact that Walter Gropius is among the four or five pioneers of the architectural style of the 20th century, but what perhaps is not so easily understood by the many young people whom I see in this room is the tremendous effort that must have gone into its creation. You younger people here are very lucky. You are once again working in an idiom which has for you become an established idiom. You are very much like the designer in the Gothic style or in the Georgian style. You may dilute the idiom, you may develop it, intensify it, humanise it and do all sorts of things with it, but the idiom is there. When that building went up at Alfeld the idiom had to be created, and that would, of course, qualify a man for the highest honour which this country can give to an architect from abroad.

Dr. Gropius and the President

I should like to say a few words of a more personal kind. The next time I met Professor Gropius was at Dresden, when I was still a youngster. He came there to give one of his tremendous two-hour lectures, full of thought and full of facts, and after that he spent an evening at Frau Bienert's amongst the Kandinskys and Chagalls and Picasso's 'Sewing Girl' and many of the younger German expressionist artists. He came from Dessau then, and Dessau means to all of us here the Bauhaus buildings, a series of buildings which represent Walter Gropius's mature, finished, perfect style.

In the house of architecture there are many mansions. Vitruvius was of the opinion, as you perhaps know, that an architect must be well versed in philosophy, in music, in medicine, in the law, in astrology and in several other things. Our list today may be a little different but it would be equally long. Perhaps it would be right to say that the perfect architect today must be an artist, the head of an organisation, a human being of a burning social responsibility. Walter Gropius possesses all those three qualities, and in his life and his work they have continued to cross-fertilise each other. He has never allowed the artist to break out of the wholesome discipline imposed by the organiser and the social reformer, and it is hardly necessary to say that he has never allowed the organiser or the social planner any inroads into his artistic integrity.

Discipline and integrity—they have marked Gropius's work with the young, of which Sir William Holford has told us; they have marked his study of mass housing, which contains food for thought for many years to come, and they have marked his recent pronouncements on the relations of the architect with the building industry.

Discipline and integrity—I have never in my life met these two qualities united in one man so powerfully and so intensively as they are in Walter Gropius. That is why I wish to end by placing my little wreath at his feet with those of the other speakers.

Dr. J. Leslie Martin, M.A., Ph.D., Vice-President: I have been looking at the distinguished list of Gold Medallists and have noticed two names in particular which I think important on this occasion, because they have been linked so closely with the name of Dr. Gropius. I refer, of course, to Frank Lloyd Wright and Le Corbusier. These three great architects are of course generally regarded as the pioneers of modern architecture. I believe that they all started with a common point of view. The thing that interests me so much now is the difference between them and the different contributions that they have made to architecture.

I cannot help feeling how very great these differences are. If you think of Le Corbusier or if you think of Frank Lloyd Wright, you think of the very powerful and personal style of building. The influence of our Gold Medallist this evening is no less great but his influence has been of a different kind. I believe that it has been an influence not on style but on method, and that seems to me to be the very important thing about it. His influence is the result of a

tremendously sustained effort to give the designer his place in all aspects of industrial production.

And what a tremendous influence it has been over the past thirty years. I speak as one who was being trained when Dr. Gropius was carrying out his great experiment at the Bauhaus. I am one of the many students in Europe who were inspired by that tremendous effort of integration which he made, by the idea of the fusion of art and technique, by the conception which involved the working side by side of the architect, the industrial designer and the painter, and above all by the way in which Gropius balanced the hard facts of an industrial age with human values.

The important thing about all this seems to me to be that Gropius set by his educational system a pattern for a correlated development of design in an industrial age, and he has spent his life in filling out that pattern. Those works of architecture and industrial design which he has created are tremendously important in themselves, but I do not believe it is important to Walter Gropius that he should have established a style. It is the method on which he lays the stress, and that method is being continued by his students—who are now teachers, architects, furniture designers, weavers and typographers—all over the world.

It is therefore very difficult to pin down the influence of Walter Gropius by looking at a few buildings and pointing out derivative examples. His influence is far more subtle. It is an influence of an infiltrating and multiplying kind, and it is not surprising to me that that influence has spread throughout the world.

I too of course have attended a lecture by Walter Gropius. I believe it is now twenty years since he gave a lecture to a student congress in Newcastle, and I remember that on that occasion students absolutely packed the room. We were in one of those old lecture theatres with a flight of steps, and the students sat ranged on the steps as on the side of a mountain. They were enthralled by Gropius's lecture. The warmth of their reception could not be mistaken, and at the end of the lecture an old and distinguished figure with white hair stood up to propose a vote of thanks. He stood there, elevated by the steps and looking down on to the platform, and he said, with very great grace and very great feeling, that as he watched the slides and listened to Walter Gropius he felt like Moses on the slopes of Mount Pisgah looking out into the promised land.

I do not think that we have quite reached that promised land, but Walter Gropius, more than any other architect of his generation, has done his best to take us there.

Mr. J. M. Richards [*A*]: Like Dr. Martin, I speak as one who was a student when the name of Dr. Gropius first began to be spoken among English architects and who was only a few years removed from being one when Dr. Gropius himself arrived in this country, so all my architectural life has been lived in the clear light—if I may so put it—that he has so searchingly directed on to the role of architecture in our time, and I count myself fortunate that it has been so.

Dr. Gropius arrived among us as a prophet who, for political reasons, was no longer being honoured in his own country. We were keen to pay him honour over here; at first simply because of the reputation that he brought with him and as a token of our dislike of the forces that had driven him from his own country, and thus from his natural field of operations as a teacher and a builder; but soon his personality began to make itself felt among us and we realised that we had in our midst someone with ideas about the essentials of architecture that held immediate lessons for us and indeed for every country of the industrialised world.

Our feelings unfortunately stopped short of action, and we still regret that the honour which we paid him was only the lip-service of a few instead of the active patronage of many. We let him go to America without doing him the one real service an architect requires of his fellowmen, that is to say without giving him the chance, except for a few relatively trivial commissions, to build.

On this occasion I do not want to dwell on that failure of boldness and imagination on our part, but I want to refer to the remarkable way in which the clear-sightedness and the grasp of essentials that struck us so forcibly when Dr. Gropius was working alongside us have continued in evidence, wherever he has been and in whatever context they have been expressed.

As an architectural philosopher Dr. Gropius has been concerned with the same thesis for forty years, because the world has not in all that time come properly to grips with the problems of industrial production which he saw so clearly from the beginning to be the clue to modern architecture. That does not mean that Gropius has been saying the same thing for forty years. The ideas that he shapes for our instruction are not static; they are always changing according to the particular realities against which they have to be tested. Whenever he re-states the old problem of design and the machine, now in terms of prefabrication, now in terms of the relationship between buildings and the broader environments which man makes for himself and now in terms of the need for architects and contractors to enter into a different kind of partnership, we realise that he has put his finger on the very problem that we were just about to discover to be the key problem of the moment.

But I do not want to speak as though Dr. Gropius were simply a theorist. We admire his qualities as a teacher and a philosopher, but we should know that his strength in these roles is due to the fact that he has always been a practising architect. His special quality as an architect I think is that he has always been intensely aware of the needs of the society for which he is planning; by which I mean the people who are to occupy his buildings, not society in some abstract sense. Indeed when I cast around in my mind for an explanation of why Dr. Gropius has stood so high in the estimation of the architectural world during the thirty years since I was a student, through all the fluctuations of fashion and reputation that have taken place, I come to the conclusion that it is very largely because everything that he builds is an immediate response to a practical human problem, and he has never allowed theoretical considerations to divert him from the simplicity of that response.

Much of Gropius's work has been experimental, but not at his client's expense. We owe a great deal to architects who have had the intrepidity, or the sense of the importance of their mission, to pursue their visions of the future whatever may be the realities of the present. The occupants of their buildings are the martyrs without whom no great cause moves forward. But Dr. Gropius does not need to use his buildings to demonstrate a theory, since his theories themselves arise out of his understanding of the way in which people use buildings and building resources at the present time and in the present circumstances.

Like all who see things more clearly than their fellows, Dr. Gropius is of course a prophet, but unlike many prophets he sees things not only as they might be but as they are. That is why the world is at last learning what he has to teach. There are many people of whom it can be said that he is a man essentially *of* his time, but there are not so many people of whom it is also true to say, as it now is of Dr. Gropius, that his time is very much what he himself has made it.

Mr. E. Maxwell Fry, C.B.E. [*F*]: Only I now stand between Walter Gropius and the Gold Medal. I am commissioned to say my piece and I am very glad indeed to say it. I have never stood in Dr. Gropius's way and I am not going to do so now for more than a few moments.

Le Corbusier once said that there was plenty of talent in the world but there was a dearth of character to go with it. In Walter Gropius the two sides are fused to make so fine a metal that if he were to be melted down to make a medal for the next comer it would be too heavy for one man to lift; it would need a group, and that I think would please Dr. Gropius.

As a young man Gropius was granted an idea of what our life could be; so complete, so grand, so beautiful as to give him as much right as Jean Jacques Rousseau to make for the nearest house-top and blazon it abroad to the world: but Gropius had also a character so strong, a bearing so modest and a heart so loving that instead he gathered his friends about him and shared the idea with them. With this idea and with this group of friends he set to work and, with infinite patience and care, less for himself than for the idea, he planted it in fresh young soil. At Weimar it grew and flourished and, despite opposition and war and despite his own transplanting, it spread like the cedars of Lebanon until it covered the earth. There are none here who do not rest beneath its shade or eat of its fruit.

We salute today one of the prime authors of our architectural being, a great architect, a great character, the greatest teacher; but in him we salute an idea that has still need of talent and character and love to carry it forward, so that our life shall become comprehensive, more coherent and as well understood as once it was. After this, I salute my own friend and my partner during his few but memorable years with us in England—Walter Gropius.

Two Royal Gold Medallists, Sir Percy Thomas, O.B.E., LL.D., D.L., Past President, and Sir Howard Robertson, M.C., A.R.A., S.A.D.G., Past President, then escorted Dr. Walter Gropius to the platform and the President invested him with the Royal Gold Medal.

Dr. Walter A. G. Gropius, Dr.Ing. (Honorary Corresponding Member, U.S.A.): As you can imagine, I am somewhat overwhelmed by this reception, but now I want to give my deeply felt thanks to Her Majesty the Queen for the great honour that she has graciously bestowed on me and to the Council of the R.I.B.A., who proposed my name to Her Majesty.

I trust that you all know how wonderful and at the same time how embarrassing it is for me to receive so much praise from your President and from my friends who have spoken here, for after all I have simply followed an idea that has intrigued me from my early youth, that is the reunification of art and science, without which there cannot in my opinion be true culture. The urge to find the inner and outer freedom to pursue this idea was a necessity, not a virtue, and the fact that it involved pioneering in many fields has tremendously enriched my life.

Your generous words of friendship and appreciation have fallen on the ears of somebody who, for many years of his life, has had to make a stand alone and without the backing and encouragement which come naturally to a man who is identified with the specific national background into which he was born. I have been nobody's baby during just that span of life when a man should have normally reached the apex of his career; when seed, sown earlier, should have come to fruition; and when confidence gained should have resulted in greater tasks and responsibilities.

But what I lost on the national plane was generously awarded to me on the international plane, and now that my English colleagues have pronounced their verdict and admitted my name to the distinguished rostrum in the hall of the R.I.B.A. building I feel more of a world citizen than ever.

This is the second time that England has given me a most friendly welcome, because soon after Hitler assumed power in Germany I arrived penniless in London, and only the helpfully extended arms of Jack Pritchard and Maxwell Fry, who took me on practically unseen, cushioned the shock to me. It took some brainwashing to convert me from a metre-conscious to a foot-conscious architect, but after that, when Max Fry and I felt ready to take on an avalanche of commissions, unfortunately the political horizon began to cloud over and building initiative, which depends so much on an optimistic atmosphere, was only moderate.

I left England and many friends, not at all sure at that time whether I was doing the right thing in accepting an assignment for teaching and in changing again to another country, when all I wanted to do was to build. With my job at Harvard I was for many years so swallowed up by my new duties that it was almost impossible for me to pursue at the same time the aggressive campaign for commissions that an architect is supposed to wage in the United States. Coming from Europe, where as a rule clients pick their architects, I had moved to a country where architects pick their clients, and it took some more brainwashing to break me into this new concept and working method. I tried to explore the practical field of architecture in an unknown land while at the same time keeping control of my newly introduced educational programme at Harvard University. Then soon, in consequence of the war, I was forced to close my private office for the third time in my life.

When after the war a fantastic number of veterans converged on the universities under the liberal educational programme of the United States Government, the Harvard Graduate School of Design was under a tremendous strain, and there was little chance for me to split off enough time single-handedly to start my building practice again after such a long involuntary pause. During the teaching career that had been forced on me by circumstances most people had come to think of me as a teacher foremost, and this in the United States, in contrast with Europe, was almost synonymous with withdrawal from practical participation in designing and building. There is an American slogan which expresses this attitude very neatly: 'Who can —does; who can't—teaches.'

I had from the beginning taken a strong stand against this separation and had accepted my appointment only on the condition that I could maintain simultaneously my own architectural office; an arrangement which has subsequently been widely accepted in the American schools of architecture.

Therefore I welcomed it when some of my former students and their friends, having returned from the war, took me up on my own tenets with a proposition to set up a team of architects who would carry into practice a scheme of collaboration which I had long stressed and rehearsed at Harvard. This my team, The Architects' Collaborative, has now stood its test for over ten years. My strong inclination for team work has increased with time, but I find that our set-up has often been a conundrum to friends and to the Press, who do not know who is who or who does what. The English ARCHITECTS' JOURNAL even called me a few days ago an enigma. Small wonder, for our society is still so obsessed with the idea of the individual genius, working in splendid isolation—a bequest of the last century—that we cannot conceive of cultural achievements in any other sense. Still, in the 18th century such exalted individualism was much less pronounced, and today I believe we are well on our way again to reclaim the individual talent to work as *primus inter pares* in a group of collaborators.

My first comprehensive collaborative effort has been of course the Bauhaus, and all who partook in that venture are nostalgic to this day for the inexhaustible stimulation that arose for all of us from this collective task.

In accordance with this experience, I later on abandoned the old boss-employee relationship in my architectural office in Germany, putting the emphasis on the group. Today I go even further. I work with seven partners and five associates, and we emphasise the group name above those of the individuals. This does not mean that the members of our group do not have full individual responsibility for their respective jobs, but each individual contribution passes inspection by the whole team, and wherever flaws or inconsistencies are detected the job is handed back for reconsideration to the job captain; who however makes the final decision himself.

For the past years some of my partners have been quite engrossed in designs for school buildings, while others have supplied the United States Air Force with airports and housing facilities. I myself am at the moment concentrating on one of my pet ideas, the development of a civic centre for Tallahassee, the capital of Florida. At the same time I am working on a large scheme for the rebuilding of a bombed part of my home town of Berlin, in Germany. Shortly before I left for England we were asked to design the United States Embassy in Athens, so I shall have the pleasant duty of going to Greece in May to investigate the proposed site.

The pooling of diverse talents and interests makes working in a Collaborative a many-sided experience, and each member is less in danger of getting into a self-centred rut. By long practice I have come to the conclusion that working in teams keeps our vanities down and increases individual freedom and initiative on a much broader basis. Of course the creative mind asserts itself usually in any circumstances, even against heavy odds, but if we want to raise the average performance team work becomes essential to sharpen and improve the individual contribution.

I believe that this approach contains a true democratic spirit. For how can we establish a system of collective security among the nations unless we first develop attitudes and techniques of collaboration in our own set-up? This seems to me to be the *conditio sine qua non* before we can reach our cultural goal—unity in diversity.

In accepting this Medal I think of all those who have worked at my side towards this goal. Again I thank you for this great token of your esteem and for the uplifting words with which you have honoured me. I shall never forget this day.

Architectural Economics: The Conference Papers

I. E. D. JEFFERISS MATHEWS, O.B.E., A.R.I.C.S.[*F*]

Introduction. My colleagues and I have had some difficulty in determining a title for this series of papers which sufficiently implied the nature of the subject we want to put before you for discussion. I should like first therefore to explain what we have in mind.

It is as near a true statement as does not matter for this purpose that 'Architecture is the only art that is wholly related to economics'. I am not discrediting the importance to the community of the painter or sculptor when I say that their arts have no economic significance. Whether a painting, for example, is by an accepted genius, or whether it is by a student, its economic 'value' is a mere pittance of some canvas, a little wood and some paint. Its so-called 'value' is, initially, what the artist can demand of his public and what they are prepared to pay. Even if the public think that they are 'paying' for investment, the artist has no responsibility for the economic value of the money expended on the purchase. The architect on the other hand can virtually build nothing—and so cannot express his creative art—without incurring definite 'costs' which have an economic 'value'. In architecture, it being both and at the same time 'an art and a science', it is easier to see the relationship of science to economics than it is to appreciate the relationship of our art. This is perhaps because in the past the economical aspects were simpler and not apparently of such importance, although I suggest that relatively they were present and as pertinent as they are today. A study of the records which are available to us of the building of medieval religious buildings for example makes it quite clear that the people concerned were very 'cost conscious' and that it had a considerable effect on the design—on the architecture. As the way of life developed and it became inconvenient to herd round a flock of sheep to barter for some sacks of grain, so 'money'—coinage—became the convenient and flexible means of barter. At first it had a simple and straightforward relationship to 'value'—'cost' and 'value' were much the same—but inevitably such a convenient means of barter soon lent itself to the complexities of borrowing and of lending for gain until through the years this simple basic relationship has become hardly discernible, and today we have the situation where 'cost' and 'value' are often poles apart—a situation which we describe rather sweepingly and generally as economics.

It is therefore merely relative that we have to be more aware of all aspects of the 'cost/value' relationship, and because of this the effect and bearing on our designs is—or should be—more evident than in the past. It is of real and vital importance, and whether we like it or not our whole work as creative artists—our entire contribution to the community—is dependent on our work being 'economic'. To stress my point by the opposite: the value of the architect to the community does not depend on his skill as a creative artist alone—it does not matter how good the building is in appearance, even in planning and function, if it is not right for the economic requirements of the client. It is for this reason that we cannot divorce 'architecture' from 'economics'. It is in fact doubtful whether such a divorce is right—whether in fact you can interpret 'architecture', the art and science of building, without relationship to 'cost'. I use the word 'cost' in its wide sense as the ultimate yardstick of measurement of economics. 'Costs' can be high, yet economical; equally they can be low and uneconomic. The right answer is 'value'.

Into this new awareness of the importance of economics—perhaps because of it—there comes also the new relationship between architect, engineer, quantity surveyor and contractor. As Dr. Martin will show in his paper, the complexities of building are now such that the architect cannot alone be the sole creator and manager of the project. To obtain the right balance and relationship between these 'partners' of the creation of a building is one of our duties in the task of achieving the background from which the best economy can be obtained.

The purpose of these papers is to revive in our minds the great importance of ensuring that we give our clients 'value for money'—a phrase which I use as a colloquialism for the more precise one of 'economics'—and of studying how in many ways this approach to any design problem has a vital and essential effect upon all aspects of the design; in other words upon the 'architecture'. More and more as the economic structure of the nation—in fact of the world—becomes an essential element of existence and of direct effect upon every individual, as well as on the State, so must we as architects be more constantly aware of it and of our responsibility to our clients to ensure that it is sound. For this they will often need guidance. It is in my view no excuse to say that 'the client didn't mind spending that money', or 'that he wanted it cheap so that he had it that way'. Our responsibility to our clients is to advise them of the most economical way to meet their particular case, just as it is obviously our responsibility to advise them on plan form and arrangement. We have an exciting challenge these days: to provide good architecture within the economic requirements of the period in which we build. Never should we say that we could not make a good job of the building because the 'economics prevented it'. We have seen that architecture and economics are inseparable; therefore we have the job of moulding our architecture to the economics of the time. This is just what the tradition of architecture has always been. We are only following tradition.

On the basis of this introduction we can consider how best to meet and handle the many aspects affecting our designs which this necessity to observe the economical aspects demands. My paper is the introduction to the subject. It is intended to remind us of some of the many economic aspects affecting design which must be studied in any building project, and to indicate how these economic factors can affect our design. In particular also I am considering the problem from the point of view of the architect in private practice. Dr. Weston will in his paper show where the data necessary for the economic studies can be obtained—in fact how to carry out the economic studies. Dr. Martin's paper is primarily devoted to showing the effects of making the proper economic surveys on the ultimate form of the building. To generalise, he will develop his theme on the experience of the architect officially employed, but we feel it right to state that whether the architect is self-employed in private practice or salaried-employed by a public body the need and necessity for the proper economic survey and determination remains the same.

Wide Scope of the Subject. I have implied in my introduction that we must not assume that our clients appreciate the relationship between building and economics. They realise of course that obvious part of it—'cost'—but that in itself is not sufficient, in fact it might well be misleading and lead towards a wrong decision. At all stages of our creation and development of the design of the building we must frequently bring the economic aspect before our client; suggest to him studies which must be made, because often he alone can make these studies from information which it is our duty to place before him. So diverse and so constant are the relationships between our designs and the economic aspects that it is difficult to analyse and separate them for the purpose of examination or tabulation. But at the risk of over-simplification of a complex problem it is right that we should attempt this; if for no other reason, as a reminder to us of the particular stages at which we need to bring the subject before our clients.

Any examination has also the additional problem that the considerations to be given differ appreciably for different kinds of buildings and, as Dr. Weston will show, different methods of building finance. At one end of the scale we have the small individual house and at the other large industrial, scientific or commercial buildings. Between we have the diverse range of schools, hospitals, laboratories, hotels, banks, shops and so forth. A really mixed bag. Each with their economic as much as their design problems.

The Example of the Small House. Perhaps the magnitude of the problem is brought home when we take two simple examples

from the extremes of the range. First, at the bottom end—the small house to be designed for an individual client. He will have given the limit of his capital expenditure, he will have expressed to us his likes and dislikes and perhaps ideas on materials. In such a case it is seldom that the correct solution of the design depends only on these factual considerations. If a capital expenditure of perhaps £3,000 is involved there may be variables to be considered within the cost of the design requirement which may well represent as much as 10 per cent of the capital. And we know that for the kind of building we are considering £300 can make a big difference to the plan arrangement, the materials and the appearance of the house.

The design data which we must have before we can create our design, in addition to the purely factual ones, will lead us to an intimate and confidential study of our client's private affairs. Always before us must be the slogan 'value for money'—how best can this client's £3,000 be spent? We must know the nature of our client's resources—is he salary-earning or a professional fee or commission man; his age; his retirement prospects; tax category; life and pension insurances; his ideas for the future of his house. Without this knowledge we are unable to determine many diverse aspects of the building. The choice of heating, for example, whether it is to be one with a low capital installation cost and higher running costs, or the opposite; whether he will be physically able to fill coal hods or whether he must spend some part of his money to avoid the need to do this and yet obtain adequate comfort. Are his finances now and in the future such as to enable him to spend regular sums on the maintenance of the house rather than to spend capital to reduce maintenance to a minimum?

Such decisions may be monetarily comparatively small, yet they might well have an effect on our design as well, obviously, as on our choice of materials. Our client may be surprised that it is necessary to resolve such problems before the design can be determined. It is probable that he would have got no further than appreciating the effect on size and accommodation of his capital limit. He would not have realised how many technical elements in building are related to these personal aspects. But he has come to us for a 'tailormade' house. He might have gone off and got something run up by a speculator or taken a ready-made job, or even something 'standardised' and paid less for it. That would have been an initial choice and presented a different situation. But he has not done that. In choosing our full services he expects *full* services, and these aspects must therefore be part of those services which we have to offer.

I am in danger of diverting from my theme at this stage, but in passing it is worth commenting that this kind of service, this economic approach, is just that which makes the difference (so often are we asked what it is!) between the house designed by an architect—may I say a 'proper' architect!—and one where no architect (again I must qualify by 'proper'!) is employed. Clearly therefore we have a duty as architects to advise on such implications, and equally clearly they affect the design—'architecture and economics'.

The Example of the Industrial Building. Now the other extreme—the example of a research laboratory block for an industrial concern. We are given the clients' basic accommodation requirements and we have studied the nature of the research to be carried out in the building. They may have indicated to us their capital allotment for the project or they have asked us how much it will cost. But this is only half the story. Our probing into their work may reveal, for example, among other things that they may want in the future to change departments. One line of their development may demand an expansion of research more than another. One line might even be decreasing. We must suggest to them that it might be better to make the accommodation flexible to meet such eventualities, however remote.

As often as not we are at once given the most definite reasons why their accommodation requirement will never have to be changed. It is, they say, the last and final word on the subject, this at last is what they want, never will they want to change it! If we did not appreciate our economic responsibilities we might be tempted to leave it at that—it would be so simple and save so much bother. But within a year we might find that Department X had become redundant but Department Y was expanding rapidly, and they must decrease the original areas allotted to the one to provide more space for the other. A general pickle and confusion would result—partitions coming down on to external walls with no relationship to window mullions, floor loadings upset, our design ruined, alteration costs astronomic; and for the rest of its existence the building would be a monument of the make-shift.

This story is no exaggeration—it happens every day; through our too ready acquiescence with a client's initial requirements we have been responsible for an uneconomic building. No matter whether the client realises this or not, nor even if he minds, nationally it is uneconomic and that is sufficient to condemn it as a piece of architecture.

What should have happened in such a case is a proper study of the economics of flexibility. It may have resulted in proving that there was no case for the additional capital cost which is, to a lesser or greater extent, related to a flexible design. Equally it may have proved that additional capital expenditure was right. But whatever decision was made after the economic study, the design of the building—plan, appearance, structural form and materials—would be affected: the design resulting from the decision for the one being quite different from the design for the decision of the other. The study in collaboration with our clients would have led us to consider, or to ask them to consider, such diverse matters as the salaries of research staff who might be involved in periods of idleness if alterations to one department stopped work in others; the extent to which the clients were prepared to invest capital today to provide for the future; the imponderable and likely possibility of building costs rising; heating arrangements in relation to thermal insulation; the effect on fire insurance premiums; and so forth.

I could continue with many other examples of the aspects to be considered but the list is sufficient to show their great variety and the effect of the ultimate decision on the design of the building—on the 'architecture'. If the study proved that there was no case for flexibility, the services for example could be run along regular and defined lines in fixed chases and ducts, which in turn would dictate the floor construction and in their turn the floor thickness and structural frame arrangement, and so in their turn the height and proportions of the building. If flexibility proved to be the right answer, a deep free ceiling-floor space might be needed so that services could easily be run hither and thither, and so change the whole proportions of the building. If partitions were never to be changed fenestration could be related to them, but if they were to be on this alignment today and another tomorrow there must be a fenestration arrangement to permit it on some regular pattern of spacing, and so immediately would the appearance of the building be affected. So again—architecture and economics—consideration of staff salaries and future use affecting proportions and fenestration arrangements.

Some Governing Factors: 'Outside' influences. I have said that to attempt to tabulate the economic aspects of building is difficult. Obviously that is so with the diversity of considerations and their ever constant implications at all stages and in all aspects of design. But appreciating that one is attempting the virtual impossibility within the limitations of this paper, and accepting the risk of over-simplification of a very extensive subject, some factual tabulation is perhaps justified as a guide and reminder to our approach to any design problem.

To a large extent although not entirely, the economics of architecture appear as the effect of the difference between the way in which any given capital sum is spent for a given accommodation requirement. It is a fair generalisation that at least 75 per cent of capital cost goes to the provision of the basic accommodation requirement—namely the cubic content, the floor area, the number of pupils in schools or the number of beds in hospitals, whichever is the unit for the basic assessment of the accommodation—irrespective of the manner in which that space is enclosed, assuming any reasonable standard of building. The major consideration therefore must be the determination of the accommodation required within the capital limit or—in these days—the less common opposite approach of determining the

capital requirement for a given and fixed accommodation requirement.

But it is seldom right to accept this as a rigid element. As all the other aspects are studied, it is frequently apparent to a client that the economics may dictate a variation in the accommodation requirement—or a variation in the capital allotment. So although it is necessary to establish some yardstick of measurement, and that is best achieved from the accommodation requirement, it often develops that the yardstick itself must be adjusted up or down to balance other aspects of capital expenditure. At all stages therefore we have constantly to look back, so to speak, at the basic requirement to see that it is not leading to an uneconomic expenditure.

Bearing this fundamental point in mind we can begin to consider the many other aspects, most of them common to the great majority of projects in one form or another and to a greater or lesser extent. Always important is the balance between capital cost and running costs, using both in their widest sense, as Dr. Weston's factual tables will show. On the larger buildings this decision can have a big effect on the way capital is to be spent, and so on the nature and form of the overall design. Inseparably related, we have to incorporate at every stage and in all aspects of the studies the national economic circumstances at the time we are building and their trend, and the conditions ruling in the building industry; which latter are of course largely the result of the former. Overall we have to relate the scientific development of building materials and structural techniques as Dr. Martin's studies will indicate.

Generally in this country we can assume a known standard of labour, although for smaller projects we cannot altogether overlook that there may be a labour element—skill/lack of skill, shortage/surplus—which may be geographical or seasonal and which may have an effect on the choice of materials and the structural form. But looking wider to work overseas, the labour availability and skill may have an important bearing on the economic aspects and consequently on design. The effect of the choice of materials is obviously an important factor. In this country, again apart perhaps from the smaller jobs, geographic factors are not often of great consequence—but shortages/surpluses of materials are of major effect, whether at home or abroad, and geographical location is an added element for work overseas. Seasonable aspects—although again more obvious for work abroad—are seldom given the consideration in this country which they deserve. The effect of the seasons on economics and therefore on design is more often what I term 'local' to certain parts of the project rather than general. My meaning is best given by example. If the programme for the project is such that wall cladding or roof covering is likely to be carried out during the normal bad weather months, there may be an added case for 'dry' as opposed to 'wet' cladding —other aspects of course being equal.

Briefly, these are the factors from 'outside' influences which can affect the economics of the capital expenditure. They represent a part of the components of the 'mixture' which have to be considered, sorted, compared one with another, and with the other 'inside' influences. They have to be taken in whole or part and metaphorically stirred up with the other factors—the client's requirements and the client's own economics—to achieve the correct overall economic answer from which will emerge the architectural form.

Governing Factors: 'Inside' Influences. The 'inside' influences—the client's requirements and his own economics—are even more diverse and therefore more difficult to tabulate with any degree of accuracy. Obviously they must vary considerably according to the nature of the project and the client; the examples of the small house and an industrial laboratory which I have given indicate this. But, again risking oversimplification and perhaps to some extent disregarding the lower extreme of the small domestic building which has factors differing so considerably from other types of building, we can tabulate under this heading the studies which must be made of the effect of such factors as the need for and extent of flexibility, thermal insulation, the staffing of a building, the nature of the capital to be used and the investment aspect of that capital, and the effect of taxation, rating, fire insurances and the statutory requirements.

If we take just one or two of these aspects and briefly consider their implications, it becomes immediately obvious how they can have a major effect on design arising from the decision, based wholly on economics, whether for example the building is or is not to be designed for flexibility for subsequent alterations. The consideration of staffing is another factor which can have important bearings on design. In most buildings staffing—administrative and executive personnel—is a big financial element which spread over the years is a bigger monetary factor than the capital spent on the building. If therefore a design can be evolved which reduces the staff requirement it may well be, as Dr. Weston will show in greater detail in his paper, that an increased capital cost is justified to achieve this. Immediately such increased capital expenditure, such modifications of design, have obviously an effect on the architecture.

Another, of even greater effect, can result from the taxation and rating aspects imposed on certain kinds of buildings, particularly industrial buildings. If for example it is practical, without loss of efficiency, to place certain production plant in the open, there may be such a reduction in rating assessment that even with some increased capital costs arising, for example, from remote automatic control equipment, there is no case for a building at all! No argument can be stronger than this perhaps extreme case to show the relationship between economic considerations and architecture! But however extreme it may be, it exemplifies the relationship and points to the studies which it is our duty to present to our clients so that the right solution is achieved.

Combining and Balancing Factors. Our object must be to equate these often conflicting factors to achieve the right economic solution, and from this to permit the right architecture to emerge. I find in practice that generally the development of this equation works out in this way. Accepting, as I have said, that it is necessary to assume as a basic yardstick a given accommodation requirement, we find, if we take the client's requirements 'blind' and relate to them the dangerous preconception of what we think the building should be without regard to any study of economic factors, that we get a steeply rising capital cost curve on the graph.

Whether this would produce good architecture or not is of course dependent on how we interpret what is 'good architecture'! From the whole basis of the argument I am putting forward in this paper, I am quite sure in my own mind that the result might be 'architecture' but it would not be 'good architecture' in the sense that architecture is dependent on economics, as the result would almost certainly not be economical. To me therefore the result would fail as a piece of architecture, just as a painting would fail from the introduction of an element of purely bad aesthetics.

Conversely, if we arrive at a solution based again on our client's requirements accepted 'blind', but developed along cheap, shoddy, niggling and petty lines in an attempt to establish ill-gained popularity on the grounds that architects are not 'extravagant', we should find the capital cost curve as a low level line, perhaps even falling away from the initial starting point based on the accommodation requirement. What this extreme alternative would produce in the way of 'architecture' I should not like to hazard a guess, but unfortunately (and here lies the common tragedy we see so much of today) it might—in fact it so often does—produce temporary popularity and lead the architect to another job.

But there lies the moral. I have said only 'another job', not 'other jobs'; a great difference, not only to us personally but to the whole position of architects in the contemporary social structure. This kind of 'cheap' solution, regardless of economic factors, cannot possibly survive the test of even a short time. Unfortunately it is as common today as the costly solution, equally regardless of economic factors. Both are wrong and when seen show only that architects have failed in their responsibility to the building public. Even more, their own failure has led sections of the public to believe that as a profession we are unable to take our correct place in the social structure.

Usually I find it comes about that the right answer, arrived at only after the most careful study survey of the many economic factors which I have indicated briefly, lies

in a capital cost line on the graph which roughly bisects the two extreme lines I have described. But I must say at once that this is a dangerous generalisation. It is probably correct in the majority of cases, but there are sufficient exceptions to establish the overall point that every case with which we deal must be taken on its own merits and surveyed accordingly without any preconceived conception of what the result will be—in other words without influencing the result by what we think we should like to build.

I am glad that this is so because, in spite of the apparent unification of the architectural solution dictated by the common national—or even the global—economic conditions of our day, there remains always that degree of individualism which is essential, as it has always been, to our art and science. In other words, we do not know how the solution is going to appear as a piece of architecture until we have solved it as an individual case. From this must spring a virile and lively architecture, correct economically, good aesthetically. Most certainly it can and should be comparable with the best that has been done before: done perhaps in very different economic circumstances but none the less circumstances which dictated the architecture—not architecture forcing itself regardless upon the economic structure.

II. Dr. J. C. WESTON, Ph D.*

WITH THE DEVELOPMENT, during this century, of new methods, materials and techniques, the architect's primary function as a designer has been rendered increasingly complex by the need for him to act as the co-ordinator of a range of widely differing skills. In recent years too the financial conditions have meant that the architect has had to work within a progressively more rigid framework of constraints imposed by economic as well as functional requirements. Habits of thought however die hard—as is reflected by current training in many architectural schools—and there is still in some quarters a nostalgic hope of a return to the 'good old days'. Too often either scant attention is paid to economic factors in the early stage of design or they are regarded as unpleasant necessities which divert attention from the 'real' business of design. Architecture is an integral part of the society in which it exists and to underrate the importance of costs in the 20th century when money, labour, fuel and building materials are often in short supply is as inappropriate as mass production in the days when skilled labour was freely available to produce the comparatively few buildings required. As Mr. Jefferiss Mathews points out, satisfactory architectural solutions must inevitably reflect the conditions within which they are conceived.

This is not to suggest that economics should become the major design consideration or that the cheapest solution regardless of quality is the best. Architectural economy implies the joint consideration of money spent and, in the broadest sense, the value obtained, both functionally and aesthetically. The decision between alternatives should combine cost, function, appearance and quality; the relative importance to be given to each depending on the class of building and the requirements of the client. There is no reason to suppose that the constraints now imposed on the architect should in any way prevent his achieving buildings which are satisfying in every way. Indeed, your President, Mr. C. H. Aslin,[1] has said that nowadays the perfect architectural conception is produced by 'a patron with exacting demands, an irritating site and an acute shortage of money'. It is within this realistic concept that I propose to consider the question of Architectural Economics, which I regard as the study of ways of providing and applying economic data to the design of buildings, which are acceptable functionally and in quality, in such a way as to minimise capital and running costs. The joint consideration of both capital and running costs, including maintenance, is important since often the client himself, concerned as he is with his immediate shortage of money, may overlook the fact that slight increases of capital cost may lead to substantial reductions of running costs. It is however convenient for discussion to consider separately the questions affecting capital or running costs.

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Cost control. The form in which the client presents to the architect the economic framework within which he wishes to work depends on the type of building involved. For an individual house the requirement may be in the form that, for example, 'the cost should not exceed £4,000'. For local authority housing on the other hand the requirement usually sets a limit to the cost per sq. ft. of floor area, while for schools the cost is controlled in terms of expenditure per pupil. These are merely alternative ways of setting some economic restraint on the design from the client's point of view, while leaving the architect freedom within this limit to propose solutions. There may be other functional and planning constraints, but these in effect merely further reduce the variety of acceptable solutions and do not in principle differ from the constraints set by the cost requirements.

Many architects are in a much better position to deal with the functional and planning requirements than with the economic needs, and the recent series of articles on the subject of building costs in the ARCHITECTS' JOURNAL[2] suggests that the methods employed frequently leave much to chance. The result is that at a comparatively late stage of the design work it is found that the building is likely to be too expensive. The only course then possible is to omit various features or substitute inferior materials, usually in finishings and fittings; often as a result the original architectural conception suffers and the client is left with an uneasy feeling that he has been provided with a 'second best' solution.

If economics are to play their part throughout the design process and to become an integral and automatic part of design then it is essential that some more satisfactory method than the present technique—which at best is 'experienced intuition'—should be devised and a proper form of cost planning developed.

To do this involves the collection of price information from the architect's earlier projects in such a way that it can easily be applied in design. This means that the data relating to the cost of other similar buildings must relate to the individual components of the building such as walls, floors, roof, electrical services and so on, rather than to the cost of trade operations as normally included in the priced bills of quantities. Fundamentally there is no difficulty in obtaining data in this way but it would involve additional work in rearranging the information available in the bill in its present form. It is of course open to question whether the bill of quantities itself should not be modified to provide directly the type of information which is required. Indeed, within a period of rapidly changing techniques and when extensive use is being made of sub-contracting, there seems little doubt that consideration should be given to the question of whether the present form of bill is best suited to present-day conditions. Dr. Martin enlarges on this question in his paper.

Whether data for cost analysis should be accumulated by the architect or by the quantity surveyor on his behalf is a question which the Conference might discuss. Whatever method is adopted it is essential for the data to be available to the architect in a simple form from the initiation of the project.

The type of information which it is necessary to obtain by cost analysis for use subsequently for cost control purposes is illustrated by Table 1. As an example, the breakdown of prices of a number of blocks of flats is taken; the functional components used being those which can be reasonably easily obtained from priced bills. It is questionable whether data from the bills, which is the price to be paid, including profit, rather than the actual cost of carrying out the work, should be used for this purpose. While the use of the actual cost is preferable it is only rarely that such data will be available, although more might be done by architects collecting data themselves through their clerks of works.

The form in which the information is set out in the analysis, that is, as the cost per sq. ft. or per ft. cube or per pupil, depends upon the type of building involved and in a subject so much in its infancy it would be unwise to lay down hard and fast rules. It seems reasonable however to relate the figures to the method employed by the

client in stating the cost requirements. Consequently, since the acceptable price of flats is usually expressed in terms of the nett floor area within the flat, this basis has been used in Table 1. The prices expressed in this way should be combined with a statement of area ratios of certain of the components: that is, in this case, the ratio of the areas of external walls or partitions to the nett floor area. The ratios relate to typical upper floors rather than to the building as a whole since the upper floors are generally more strictly comparable. In the example given, data are provided for each of three blocks. These show a range of cost for each component and in fixing the target for cost control in design judgment must be exercised and the actual design of the examples borne in mind. Some allowance for contingencies is also desirable and the targets suggested in the last column would be reasonable in the example given.

It may of course be argued that many architects follow this practice to a greater or lesser extent and in the light of their considered experience are able to control costs without the need for formal statements of this kind. Where an architect has been concerned for a long period with one type of building this approach may be adequate but generally speaking a more formal procedure seems to be essential.

It is difficult for an architect called upon to design a type of building for which he has not had some previous experience of costs, but even here the breakdown of the data into functional components is helpful since targets based on other types of building can be used for the individual components. The situation can arise in which it is only by the collection of data from a number of sources that an adequate basis for the targets can be obtained. Multi-storey flats, say over six storeys in height, provide such an example and because of this the Building Research Station has recently collected extensive data on the current prices of multi-storey work. From this study, C. N. Craig[3] has been able to provide target prices for the main groups of components in blocks of flats in the region of six to twelve storeys in height; this work was described in the April issue of the JOURNAL. It is interesting to note that the comparison of prices in this way leads not only to the establishment of target figures but also, by making possible an economic comparison of designs from many different offices, suggests ways in which substantial reductions in cost should be possible.

Planning Economy. The inclusion in the cost analysis of data relating to the area ratios of components provides another useful means of cost control. The examples in Table 1 show only a relatively small range but in the survey of the cost of high flats the ratio of nett to gross area for upper floors was from 0·71 to 0·91 while the ratio of external wall area to nett floor area ranged from 0·80 to 1·60. These two ratios are of particular importance. The first is in a sense a measure of planning efficiency while the second governs the heat loss of the building, and hence both the initial and running cost of the heating installation. The figures obtained in the survey of flat costs[3] suggest that for typical upper floors the access area should not in fact exceed 15 or 16 per cent. With a cost per sq. ft. gross of around 50*s.* to 60*s.* the addition of an unnecessary 10 per cent to the gross area would obviously have a very marked effect on the overall cost.

The wide range of area ratios illustrated above suggests that much more use should be made in design of such ratios and target figures established on the basis of well-planned examples of other buildings of the same type. A notable example of this having been done is provided by the work of the Ministry of Education development group on school design. Their success in stabilising prices of schools in terms of the cost per place has largely derived from the increasing efficiency of planning resulting from a reduction of excessive circulation and access areas. A similar result has been achieved by the L.C.C. and is dealt with in Dr. Martin's paper.

Construction Economy. The main application of cost control is to the choice between alternative forms of construction, for example between different ways of providing a required standard of thermal insulation for walls. It is considerations of this sort that Sir T. P. Bennett presumably had in mind when at the last Annual Conference[4] he emphasised the need for publishing data comparing the costs of a wide range of alternative forms of construction. To ask the quantity surveyor to provide comparable estimates for a substantial number of alternatives may put an unreasonable burden on him, and at the same time it often happens that the basic data on which to build up the prices is not readily available. On the other hand the publication of prices for alternative forms of construction presents problems, since they can only conveniently relate to average conditions and actual tenders may differ widely from them. Furthermore, prices change with time and the continuous revision of prices for a large number of items would be a considerable undertaking. However, the relative costs of different constructions should change less rapidly with time than the absolute values. The Building Research Station therefore recently published data on the average prices of a wide range of different forms of construction for walls, floors and roofs together with the amount of thermal insulation which was provided.[5] At the same time the man-hours for the operations involved and the basic material costs are given, so that some adjustment is possible as the costs of either change. The important feature of this publication is that it gives, for the first time, not only the functional properties—insulation, fire resistance, density, etc., of the various forms of construction—but also their costs. By its use the likely cost of a construction to provide the specified degree of insulation can easily be found, or alternatively the best insulation for a given cost can be selected.

TABLE 1

Cost Analysis of Multi-Storey Flats

Prices per sq. ft. nett

Component	Project A	Project B	Project C	Target for cost planning
	s. d.	*s. d.*	*s. d.*	*s. d.*
Substructure	3 3	3 6	6 3	3 6
Frame and walls, floors, stairs and roof structure	20 4	20 2	15 2	17 6
Partitions	0 8	1 0	1 0	1 0
Plumbing and heating	6 3	6 3	7 1	6 6
Joinery	4 3	4 4	4 5	4 3
Plasterwork	3 2	2 11	1 11	2 6
Floor finishes	2 2	2 11	2 0	2 0
Painting and glazing	2 5	1 9	2 3	2 0
Windows	1 8	1 6	1 2	1 3
Electrical	2 2	2 3	2 11	2 3
Steel and ironwork	2 4	2 0	1 4	1 6
Roof finishes	0 10	0 7	0 8	0 9
Lifts	4 2	2 10	2 10	3 0
Total	53 8	52 0	49 0	48 0
Storeys	8	9	10	
Nett area	35,000	37,000	22,000	
Gross area	47,000	46,000	28,000	
Area ratios of typical upper floor:				
Nett/Gross	0·81	0·85	0·84	0·84
External wall/Nett	1·12	1·11	1·14	1·12
Partitions/Nett	0·80	0·96	0·40	0·80

Another interesting example is provided by the examination which has recently been made of the structural design of a number of multi-storey flats in blocks of from six to twelve storeys.[3] The drawings and specification of these flats, which had load-bearing concrete walls, revealed a wide range in the amounts of concrete which had been used. In fact nearly three times as much concrete was used in some blocks as in others. It may be argued that the lighter buildings were using other materials for load-bearing purposes and that the cost of these would offset any saving due to the smaller amount of concrete. But in fact the cost of the superstructure (excluding finishings and fittings) for the blocks using the larger amounts of concrete were nearly twice as dear as the others.

In seeking ways of reducing costs without loss of quality, much more attention could be paid to the methods which are to be employed in actual construction. The designer is often content to leave the matter entirely to the contractor, and while the latter will undoubtedly overcome the problems imposed by the design, this is often only possible by increasing the cost. The type of plant which may be available should properly be considered at the design stage; the increasing use of tower cranes opens up possibilities for handling larger units than could hitherto be economically contemplated. With present contractual arrangements however this may be difficult to achieve except in a general way.

Another example of the same type is provided by the design of shuttering for concrete. This is generally left to the contractor and the architect is often unaware of the consequences of comparatively minor changes in design in preventing repeated use of the same shuttering. Furthermore the shuttering required is often rendered very complex by small design details which might easily be modified without detriment to the architectural conception. The importance of this subject can be realised from the fact that the cost of the concrete in a wall is often less per sq. yd. than the cost of the shuttering that encloses it until it sets. It is suggested that at least the larger design offices might well consider whether shuttering design should not properly fall within the field of the architect or his engineering consultant. In any case, greater attention to design detail to allow repeated use of simple forms of shuttering could lead to definite reductions in cost.

During a period of developing building techniques it is clear that means must be found to ensure that the production methods to be employed are fully considered during design. Whether this is best achieved by greater attention in architectural training to production methods, or by the nomination of contractors at an early stage, or by the development of firms providing for both design and construction, is an important question for architects to consider.

Running Costs. So far I have concentrated attention on first costs, but it is just as important at the design stage to consider the ultimate costs of running the building; that is the costs of heating, lighting, administration and maintenance. Not only that, but over the life of the building the need for changes in layout is almost inevitable, particularly for such buildings as factories, offices or laboratories. Here added expenditure in the first instance may well more than offset the cost and interference with the work arising from subsequent alterations.

TABLE 2

Equivalent Capital Value of an Annual Expenditure of £1 per annum

Period	Rate of Interest		
	5 per cent	5½ per cent	6 per cent
15 years	10·4	10·0	9·6
20 years	12·5	12·0	11·5
40 years	17·2	16·0	15·0
60 years	18·9	17·4	16·2
999 years	20·0	18·2	16·7

TABLE 3

Maintenance Costs of Local Authority Housing

Item	Maintenance cost as percentage of annual maintenance costs	Maintenance cost as percentage of initial cost
External painting	32	100
Water service	17	84
Heating, cooking, lighting	14	33
Internal structure and finishes	14	7
Main structure	10	5
External services and site works	8	20
Sanitary fittings	5	22
Total	100	

The first requirement to enable capital and running costs to be considered together is to establish an exchange rate between annual expenditure and first costs. The equivalent capital value of, say, £1 per annum of running costs depends on the rate at which money can be borrowed and the period over which the loan is to be repaid. Table 2 shows the equivalent capital value of £1 per annum at different rates of interest and for various periods. The meaning of these figures is that, for example, a payment of £1 per annum will pay the interest on a loan of £12 at 5½ per cent and repay the loan within a period of 20 years; it is in fact the rate of exchange between current and capital expenditure. It is clear that the figures do not differ very greatly with the period taken for the loan. These rates of exchange make no allowance for any inflation during the period, which would in fact increase the running costs. To take some account of this possibility, there is much to be said for ignoring the actual term of the loan and taking the figures for an infinitely long loan (nominally 999 years). This has a further advantage that it is no longer necessary to have available tables of the equivalent value of £1 per annum, since for a long-term loan the equivalent value is the sum which will yield £1 per annum at simple interest without repayment of the capital. For example, at 4 per cent the capital value of £1 per annum is £25, at 5 per cent £20 and so on.

For a loan at the rate of 5½ per cent, which is a typical figure, the capital value of the running cost of £1 per annum is therefore about £18. In other words, an added capital expenditure of £18,000 would be justifiable if the running cost could be reduced by £1,000 a year. It is useful to consider the application of such a figure in a few typical cases. The obvious example is the effect of planning on the administrative labour costs. To take such an example; a revision of the designs of a laboratory block enabled the number of laboratory stewards required to be reduced by one. The cost of a laboratory steward was about £800 a year so that an added cost of £800 × 18, or £14,000, would have been justifiable in order to make this change possible. This is a very considerable sum and would obviously justify quite substantial changes. In the event the revised design did not involve any marked increase in cost but the example clearly emphasises the importance of considering the functions of the building, and particularly the staff involved in running it, at the design stage. In general it is likely that the saving of one man's time would justify an added first cost of at least £10,000.

Similar considerations apply of course to other annual expenditure, of which heating is the obvious example. The balance to be struck is between the added cost of better insulation and the reduction it may

mean in first cost of the heating installation and in running costs. It is for problems of this sort that the *Manual of Thermal Insulation*, to which reference has already been made, was designed.

Apart from the standard of insulation, the heating costs are very dependent on the plan adopted. It has been shown for example that in schools[6] a compact single-storey school with a storey height of about 8 ft. could have a heat loss around 30 per cent less than with a more straggling design with storey height around 11 ft. Of course a reduction of heat loss by 30 per cent does not mean that the first cost of the heating installation will be reduced *pro rata*, but the reduction is likely to be at least 20 per cent. In connection with heating costs, it is perhaps worth while drawing attention again to the question of ventilation and open windows. Openable windows cost around four or five times as much as fixed windows and yet it is not unusual to find school corridors where all the windows are openable when three or four would be quite sufficient to provide the ventilation required. This is a case where strict attention to functional requirements could lead to economy of both capital and running costs without detriment to amenity.

The exchange rates given in Table 2 are applicable when the running costs are more or less constant from year to year, which is the case for heating, lighting and labour costs. There is however a tendency for maintenance costs to increase with the age of the building and in this circumstance the exchange rates given would not be applicable; the general effect of an increasing expenditure with time being to reduce the corresponding capital value as compared with expenditure of the same total amount by equal sums each year. The extent of this reduction depends on the way in which the expenditure increases with time, and on various plausible assumptions the reduction might be from £18 to £10 or £11 in the case of a loan of 5½ per cent.

An examination of the maintenance costs of local authority housing[7] has shown that the total expenditure over the life of the house is equivalent to about £245 or only about 18 per cent of the first cost. A further breakdown of this figure into the maintenance costs of specific items is given in Table 3, from which it is clear that only in the case of 'water service' and 'external painting' is the maintenance cost a substantial percentage of the first cost. The maintenance expenditure on water service is in fact made up of a number of small elements such as overflows, ball valves, etc., which are trivial in work content but whose frequency of occurrence is high.

The results of Table 3 suggest that rational design could achieve a better correspondence between initial and maintenance costs among the various components, and the use of somewhat more expensive items which reduce the cost of external painting is clearly justifiable. It must be borne in mind however that a high maintenance cost may well be appropriate for components which are subject to obsolescence—for example, if it is considered desirable to change the colour of the external painting every few years, then a high cost is justifiable; but it is perhaps inappropriate to regard this as maintenance.

Conclusions. I have no doubt that the majority of architects are fully aware of the problem of striking a proper balance between function, appearance and cost; their main problem is the need for a rational way of approaching economic questions and for the data to form a basis for decisions on these questions. I have made various suggestions of ways in which a closer use of economic data can be made in design, and I hope the Conference will consider and develop these and other methods by which better and cheaper buildings can be produced and clients given, in the broadest sense, full 'value for money'.

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III. Dr. J. L. MARTIN, M.A., Ph.D.[*F*]

I AM GLAD that Dr. Weston has defined so clearly the part that architectural economics can play in the work of the architect. He has made it clear that we are not here to discuss cheap building. In the sense that he has used the term, we are here to consider how we can most readily secure the best value for the money that is expended on building.

Put in this way the problem seems simple, and I can well understand that there may be architects who will wonder why this subject needs further discussion. Any competent architect will see that his buildings are economically planned, will understand the uses of the traditional materials, will know from practical experience their aesthetic and economic values and will secure a consistent and integrated building in which the economic factors will be given their due weight and importance.

My main argument is of course that although these happy conditions have undoubtedly existed, the situation is rapidly changing: the great bulk of building on which architects are being employed is being carried out within severe cost limits. The complexity of requirements of each building type has increased in an alarming fashion so that it becomes more and more difficult for any individual (including the architect) to state these requirements in terms which are precise enough to lead to general economies. Behind all this there is a background of constantly rising costs, of materials and labour. The traditional materials themselves are being replaced or supplemented by an ever-increasing range of alternatives that must be assessed against each other from the point of view of cost as well as performance; and this estimate of cost of the material is of little use unless it can be translated into the cost of the component parts of the building into which these new materials will be assembled—for example a wall, a floor or a roof.

I add to these complications one additional factor. It seems to me that, as the whole process of building has become more complicated, the degree of specialisation and isolation amongst those who produce buildings—architects, quantity surveyors, builders—has increased. We no longer work with a common understanding. The architect at the sketch stage is making decisions which fundamentally affect the speed and cost of production without having evidence from the quantity surveyor and builder to show precisely what the result may mean. The quantity surveyor appears at a later stage and proceeds to parcel up the various and increasingly specialised items of building and to pigeonhole these into trades that no longer contain them comfortably. The builder may receive his basic information, the drawings and the bills of quantities, in a form which is unrelated to the needs of production: and in reverse it is not easy for either the architect or the quantity surveyor to see accurately where the real costs of building have been incurred. The simple traditional process of building with well understood methods and materials by architects, quantity surveyors and builders who have a common viewpoint about the uses and the values of those materials has broken down and disintegrated. The pressing need from the point of view of the economics of building is for a new understanding and a new integration.

There are fortunately some signs from every side of the industry that this process is beginning. But the architect occupies a key position. He can accelerate the process and his readiness to do so will depend on his appreciation of the part which the economics of architecture can play. I propose to outline certain developments in architectural practice which seem to be significant. I speak of course as an official architect and therefore tend to concentrate

on those aspects of practice which occur in large-scale building programmes. For the sake of convenience these developments are discussed under three broad headings: one, the study of the functions of buildings; two, the control of cost elements in building; and three, the development of new methods and experimental techniques.

The Study of the Functions of Buildings. I place the study of the functions of buildings before any other aspects of building economy partly because it obviously precedes the normal planning and building processes but mainly because it is a development initiated particularly by architects. Outstanding work of this kind has been carried out by the Ministry of Education investigations into school planning and by the Nuffield Provincial Hospitals Trust investigation of hospital and laboratory design. Of course there are—and were before the war—many architects who have specialised knowledge of both school and hospital design and who over a period of years must have built up a considerable body of specialised information. But there is a difference between knowledge of this kind and the studies that I have mentioned. The important element in the work on educational building and on hospitals is that it is deliberate and serious research and investigation. It is undertaken by combined teams of experts: thus the team working on hospitals included, apart from architects and scientists, a doctor, a nurse, a statistician and a sociologist. What is equally important however is that it is undertaken so that this knowledge can be shared by all members of the architectural profession and used by them in planning more exactly to meet complicated specialised requirements.

Now if we accept the fact that the requirements of certain types of building are complicated and are designed around specialised activities, I think that we must admit that the pace of normal practice, either in a private or public office, does not allow the architect to make a special and separate study of each building type that comes his way. I think that we can also assume that certain types of client, for example the members of hospital boards, or the specialists who use particular rooms, such as surgeons, are busy men. They can draw up lists of rooms: they can express some general ideas: they have no time to study in detail how every part of a building should function. That is a lengthy and a costly operation. It can be studied by an individual architect through the patient accumulation of specialised knowledge over a period of years: or it can be produced by research groups organised on a national basis with the sole object of making that knowledge generally available to the profession.

I have not the slightest doubt about the advantage of this second course from the point of view of the profession. It has already been proved that this preliminary investigation and rapid dissemination of information can work admirably in practice and it is at this point that the influence of the study of the functions of buildings on architectural economics can best be demonstrated. In the case of primary school building, my own Department, working with a knowledge of investigations carried out by the architects at the Ministry of Education and supporting this by their own studies, made between 1949 and 1954 the significant reductions of area and cost per pupil shown in Table A.

TABLE A

Year	Number of Schools	Average area per pupil, sq. ft.	Average cost per pupil (based on tenders)
1949	6	74·1	£215
1950	7	62·1	£173
1950	4	51·5	£151
1951–52	6	43·9	£145
1952–53	2	42·6	£138
1953–54	4	41·5	£133

The reduction of cost in 1950 is largely the result of saving of floor space. It comes in particular from an all-out attack on circulation areas. From 1951 to 1952 the Ministry adopted a policy of combining hall and dining-room areas. Whether this policy is one which can only be supported in a period of emergency is beside the point. The fact remains that a clearly defined educational requirement and an exact assessment of space requirement enabled further savings to take place at a critical period. Indeed at this point it seems clear that space savings have been pushed to their limits. But in succeeding years the total net costs are nevertheless held against a general increase in prices, which moved upwards from 1951 to 1954 by something like 15 per cent.[1]

These figures were achieved by one single authority. Their importance from a national point of view becomes even more striking when it is remembered that savings of a similar order were being achieved throughout the school building programme. The results of the Nuffield survey which have recently been published[2] show that important savings per bed space can be achieved for the hospital building programme. They arise from such medical studies as the assessment of the degree of dependence of various types of patient—what proportion can leave their beds to use washing and toilet facilities; or the study of space needed in nursing, etc., all of which have a marked effect on space requirement. It has been shown by investigation, and demonstrated by building, that the standard of 250 sq. ft. per bed, used in good modern practice, can be cut to 200 sq. ft. without sacrificing equivalent standards of accommodation and that reductions of cost from about £1,250 per bed to £1,000 are possible.

I wish to make one final point. It is clear that I am a strong supporter of specialised research into building types. But we should be equally clear about what we expect that research to do for us. Mr. Llewellyn Davies of the Nuffield Foundation has said that the purpose of research is to give architects and others who use building the information which enables them to make the right decisions. It is not the purpose of research to produce complete answers—cut and dried type plans. What research can do is to illuminate some aspects of the problem and to provide the architect with data, information and methods of analysis which will enable his imagination to work on a better and fuller understanding of the various conflicting needs he has to meet.

The Control of Cost Elements in Buildings. The aspect of cost control so far discussed can I think be claimed by architects as a contribution to building economy which they have been largely instrumental in securing. It is a control derived from more exact knowledge of building needs and a skilful application of this knowledge in planning. The cost control that I now wish to discuss is again a control which can be exercised by architects at the design stage, but which is based on material supplied, this time, by the help of the quantity surveyor. The process has again been pioneered some years ago by the Ministry of Education[3]; it has been used in the office of our President in Hertfordshire and by members of my own Department. I mention it now because it is as yet neither sufficiently widely adopted nor fully developed.

The principle can be stated quite simply. It rests in the fact that the normal method of estimating costs *after* the drawings have been made frequently leads to waste. By this time much work has been put into drawings and specification. If the quantity surveyor's estimate exceeds the permissible figure a costly revision of drawings and specification may be necessary.

What the architect needs of course is a measure of cost—a cost instrument—which he can use with understanding and purpose as he designs. A cost per cu. ft. is an unreliable measure. A permissible cost per place (for educational building) is of some use. But it is still too crude a measure to establish a balanced expenditure in every component of the building. The objectives to be achieved have been clearly illustrated in the Ministry of Education Bulletin on Cost Control. They are:

(1) To reveal the distribution of costs in each component and element of the building, e.g. foundations, structural walls, partitions, roof, etc.
(2) To relate the cost of components to each other and to demonstrate their relative importance.
(3) To indicate where savings can most easily be made.
(4) To provide comparisons between alternatives.

[1] Undoubtedly constructional changes had some effect on these savings. But it is significant that from 1950–52 savings continued to take place although the constructional method was not appreciably changed. In 1952–53 however the saving was maintained by a constructional change to simple load-bearing brick cross walls which was in some contrast with the Ministry's own experimental work at that time.

[2] *Studies in the Functions and Design of Hospitals.* Oxford University Press, 1955, p. 27.

[3] Building Bulletin No. 4. Ministry of Education, 1951.

The method of achieving this objective is by making a detailed analysis of the costs of completed buildings. But the breakdown of costs does not follow the usual quantity surveyor's method of subdivision into trades. The costs for this purpose are analysed into the components of building as the architect conceives them, for instance foundations, external walls, internal partitions, floors, roof, etc. The main interest of the architect in the initial stages is not which trades construct a floor, but how much it costs as a whole. These costs of components can of course be broken down still further into their constituent elements.

A chart showing such a breakdown of costs for flat building is shown in Table B. It will be seen that a percentage of the total value of the work has been placed against each element. From a glance at these percentages it is easy to see where the major savings are likely to be found. The cost of all these component parts can be compared with alternatives by examination of a number of buildings, and target costs can be worked out in terms of cost per sq. ft. for each component as shown by Dr. Weston (his Table 1). If a total cost limit is applied to the building, the proportion of cost that can be expended on the various elements and components is shown in Table B. If by the use of comparative costs indicated by Dr. Weston's table a saving in one part can be achieved, then that saving can be spread proportionately over the other parts or accepted as an absolute economy.

The way in which this works for schools has been adequately described in the Ministry of Education Bulletin No. 4. This Bulletin has shown how the designer, by adopting these methods, is in fact controlling his costs accurately as he plans. Like the Ministry of Education, Dr. Weston has put his comparative costs of housing blocks into costs per sq. ft. In housing however, where the area and volume of comparable dwellings can vary very little from the norms established by the Ministry of Housing and where the variable element —the circulating areas, balconies, stairs, lifts, etc.—constitutes something over 10 per cent only of the total, it may be that simpler targets can be effective. We in the L.C.C. have proceeded by fixing target costs for each individual part—substructure, structure, cladding, etc. Thus Table B merely requires the addition of a target cost against each part and that table can be reinforced by another which shows the costs of alternatives that have been tried out in practice. As analyses are developed it is becoming increasingly possible to compare many alternatives before deciding on the appropriate construction for a particular scheme and to set these against the target figure.

Comparative cost analyses can of course be misleading. A low cost in one component may be achieved only by an increased cost in another. For example, if money is spent on expensive formwork, the cost of concrete walls may be increased: but this in turn may allow the walls to be left unplastered and may consequently show a very low cost for finishings. It would be extremely misleading to add up the lowest costs for each part and to assume that a satisfactory flat could be built at these costs.

TABLE B

Indication of Proportion of Costs in an 11-storey Slab Block containing 75 maisonettes with traditional Fires and Flues based on Cost Analysis of four such Blocks

Note: Known oddities in the tender analysis have been excluded.

Component	Element	Percentages	
		Component	Element
Substructure		11·18	
Structure		20·00	
Cladding		8·24	
Partitions		1·78	
Finishes	Roof	1·18	
	External	2·36	
	Internal	8·23	
Services	Gas installation		0·40
	Electrical installation		2·94
	Dry fire mains		0·24
	Lightning conductors		0·15
	Sanitary fittings		2·06
	Soil waste and vent pipes		1·18
	Rising mains, tanks and pumps		0·89
	Tank rooms		0·46
	Cold-water supply		0·40
	Hot-water supply		2·06
	Fires and flues		2·94
	Internal ducts		0·59
	Roof ducts		0·11
	Ventilation to bathrooms		0·89
	Drying cabinet and ventilation		2·94
		18·25	
Joinery	Doors		2·94
	Fittings		2·06
	Larder and fuel stores		1·47
	Internal staircase		1·44
		7·91	
Sundries		1·18	
		80·31	
Public staircase bay	Public staircase bay		3·74
	Lifts and enclosures		5·70
	Refuse chute and chamber		0·85
		10·29	
Balconies		9·40	
		100·00	

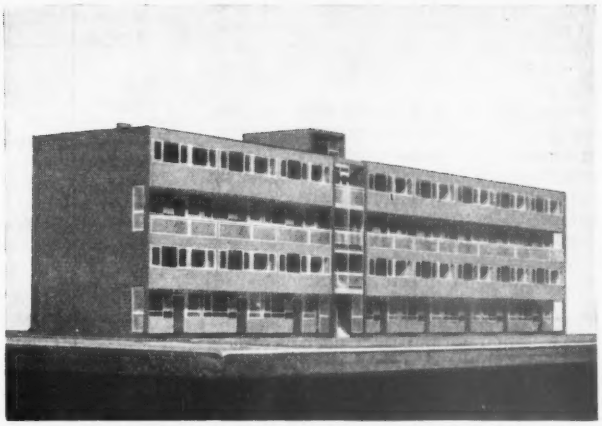
The critical factor in all this is the assessment of costs in terms of the composite parts out of which the architect designs his buildings. It is an expensive business to produce cost analyses of this kind from the normal bills of quantities. But it nevertheless seems essential that the architect should be given information in this new form if he is to use cost control effectively at the design stage. It is therefore interesting to find a quantity surveyor, Mr. C. M. Nott, writing an authoritative article on cost analysis and cost planning[4] and following this up by suggesting an unusual method of billing quantities by means of elements rather than trades. This new bill of quantities, the 'elemental bill', provides a cost analysis ready to hand. A review of the merits of this alternative method of billing is now provided in a recent number of the same Journal by Mr. Nigel Rose.[5]

I cannot speak about the effects of this form of billing within the quantity surveyor's office (although Mr. Rose is convinced about its practicability) and I am quite sure that I may oversimplify the problems in this general statement. But some advantages of the bill are obvious. For site valuation, for example, the grouping of items allows whole sections of work to be dealt with on the simplest possible basis rather than by the difficult process of sorting out parts of trades. The architect's interim estimate of costs is easily built up. From the contractor's point of view there may be at first sight some disadvantages, but here again experience may show a general saving of time and effort and a clearer and more realistic conception from the outset of how the parts of the building are related together. It would be interesting to hear the views of builders who have carried out work with the aid of these elemental bills.

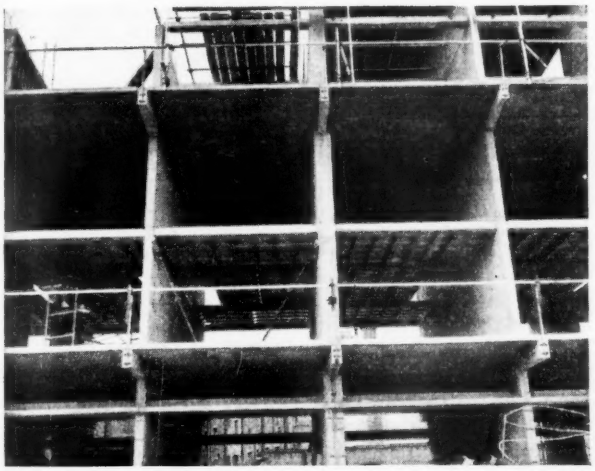
In passing it may be interesting to note that the elemental bill, if it is widely adopted, will in turn almost certainly have an effect on the traditional method of preparing working drawings. Elemental bills

[4] R.I.C.S. JOURNAL, May 1955.

[5] R.I.C.S. JOURNAL (in print at the time of writing, but I am indebted to Mr. Rose for his kindness in showing me his paper).

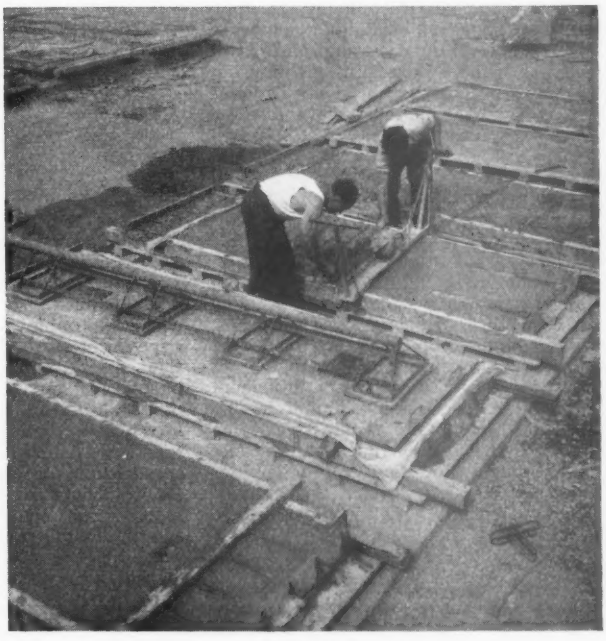


Above left: Model of one of the 11-storey maisonette blocks. Above: Model of one of the 4-storey maisonette blocks



The London County Council's experimental contract at Picton Street, Camberwell. Dr. J. Leslie Martin, M.A. [*F*], Architect to the Council

Left: Views showing the cross-wall structure, precast main floors and prefabricated intermediate timber floors. Below left: The prefabricated timber external panels infilling the cross-wall structure. Below: Precasting floor slabs on site. The men are screeding and vibrating one slab; the next slab is being treated by the vacuum process



may beget elemental drawings. Examples of this tendency were clearly in evidence at the recent small exhibition and symposium at the R.I.B.A. on 'Drawing Office Technique'.[6]

Whatever the initial difficulties may be, the great merit of the elemental bill is that it represents a move away from the increasing separation which has developed between architect, quantity surveyor and builder. It is in my view in line with the needs of architects in performing their proper function of designing buildings with due regard to architectural economics.

The Development of New Methods and Experimental Techniques. Under this heading I should like to discuss the economy—again using the term in its broadest sense of value for money—which can be achieved (*a*) by the introduction of new technical methods and experimental work, and (*b*) by collaboration between architect and builder or architect and manufacturer. In both cases, the technique of cost control—of cost analysis and then cost planning—is an essential tool for establishing criteria.

I prefer for the sake of clarity to outline the development of experimental work which has occurred quite naturally within the Housing Division of my own Department. The cost analysis schedule which is shown in Table B demonstrates by its percentages the elements of building in which a real effort to achieve savings becomes worth while; and in any large public office a remarkable range of alternatives can be tried out at one and the same time. The housing division of my Department, for example, is divided into about twenty teams and each team may have three or four separate building schemes in progress. It is therefore quite possible to carry out in practice, under normal contractual processes, three or four different methods of designing and constructing the structural frame of similar tall buildings, a number of different ways of designing and fixing external panel walls, or cladding, or balcony fronts, or various types of floors for similar spans and loadings, and so on. It has also been possible, as a result of having a programme of buildings, to carry out joint design work with certain manufacturers of factory-made components. This has considerably reduced the cost to the client or has resulted in a much higher standard of finish at the same cost.

A senior architect holding the position of development assistant has the responsibility of seeing that all the structural elements, services and components are made the subject of investigation and that these investigations are spread evenly throughout the division. The teams of architects who build are however responsible for carrying out the individual experiments and in fact are continually producing ideas for development and research, so that the spirit of initiative remains very much with these groups.[7]

The organisation is a loose one and by no means perfect, but some important savings have been made. Experiment with single-stack plumbing has shown that a saving of £10 to £12 per flat can be achieved and this method of plumbing is adopted, where applicable, throughout the division. Experiments with branched flues indicate that, subject to careful selection of the kind of solid fuel appliances to be used, savings of from £10 to £30 per flat are possible. An investigation into alternative kinds of foundations for cross wall systems of construction for given spans and for all the conditions of soil commonly to be found on London housing sites provided a most useful series of design charts (of which Fig. 1 is an example) for ascertaining quickly the most economic foundation type for a given block. The individual stove enamelled clothes-drying cabinet, which is provided for all flats without gardens, is a good example of the success of co-operation with manufacturers. Over a period of several years this unit has been improved and the cost has been halved—a saving of well over £10 a flat.

The difficulties of carrying out new techniques and comparatively untried methods of building within existing contractual procedures led me to initiate the major experiment which the L.C.C. is now undertaking at Picton Street, Camberwell. The object of this experiment was to achieve collaboration between architect, builder, quantity surveyor and engineer at the design stage. This experiment and the contractual arrangements have been described elsewhere.[8]

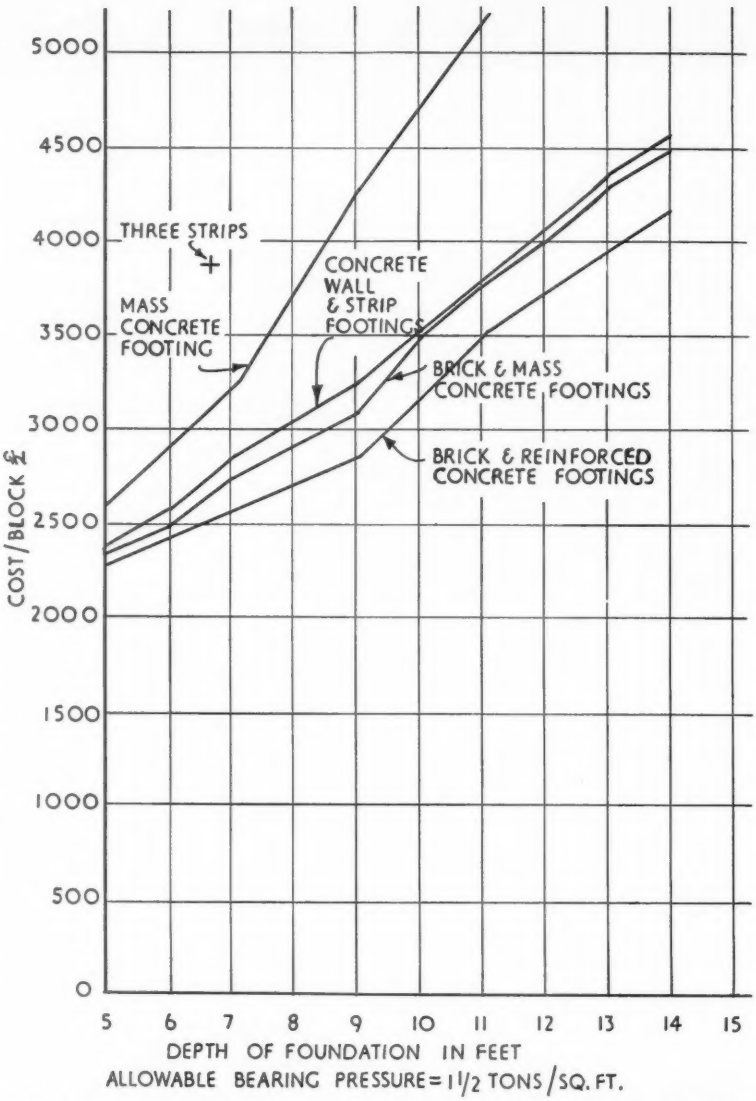


Fig. 1. Graph showing comparative costs of various kinds of foundations for a typical block of flats

[6] R.I.B.A. JOURNAL, February 1956.
[7] 'L.C.C. Technical Development and Research', R.I.B.A. JOURNAL, October 1955.
[8] MUNICIPAL JOURNAL, 11 November 1955, p. 3063. Also ARCH. AND BLG. NEWS, 10 November 1955.

Although the full financial results will not be known for some time, a few advantages are now becoming obvious. First are the opportunities for preplanning and better organisation of work which are opened up to the contractor. The first of the tall blocks in the scheme has been completed several months ahead of similar blocks in other contracts. The second tall block should reduce the time of construction by at least another four months (i.e. 11 months for the construction including foundations of an 11-storey block containing 84 flats).

Secondly, the design team has been able to take the fullest advantage of the contractor's plant when making decisions about the form of structure and whether elements should be precast or cast *in situ*; also which of these elements should be prefabricated on the site.

Thirdly, a number of specific problems have been studied which will have the greatest value in future housing work. These include:

(1) The extent to which plaster can be eliminated on concrete surfaces by the special treatment of formwork.

(2) The economics of prefabricating timber floors, wall panels, etc.

(3) The economy of cross wall construction as opposed to column and frame.

(4) The study of suitable external facing materials on lightweight dry construction panels.

Conclusion. I outlined in my opening paragraph some of the difficulties which face the architect and the building industry when any consideration has to be given to the subject of the economics of architecture. It is only too easy to see the position as one in which the old-established collaborations are disintegrating, and the common understanding of problems is disappearing. From what I have said however I hope that it will be clear that a process of integration is beginning to take place and that the general pattern of development in the future can at least be anticipated.

It will I think be necessary first of all to offset the increasing complexities of building types, hospitals, laboratories, schools, etc., by an intensification of serious research which will bring together various specialised skills and will define exactly and objectively the needs of particular types of buildings. Work of this kind can only be done effectively by a considerable expenditure of time and money and will generally have to be undertaken at a national level by Ministries, by the D.S.I.R. or such independent bodies as the Nuffield Trust or the post-graduate schools in Universities. Work scientifically undertaken in this way could extend and widen the knowledge of specialised building types throughout the profession and architects, wherever they may be, could contribute to the national need for economical building.

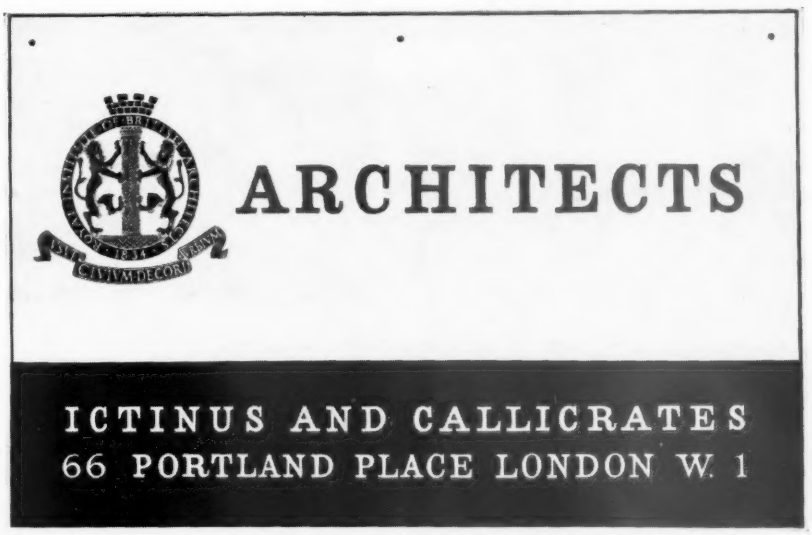
The economies that spring from exact knowledge of requirements could be still further extended by the use of cost control as an instrument at the design stage. Here the contribution must come from everyday practice and bodies dealing with programmes of work such as local authorities have a special responsibility. The quantity surveyor must join with the architect in devising and extending this use of cost control. The cost analysis must also be supplemented by a wide range of alternative methods of building which should be studied so that the cost of component parts can be used by the designer in assessing alternatives. I have said little about the builder's contribution: it is beyond the scope of this paper. I need hardly add however that the efforts of the architect will need to be balanced by a corresponding effort by the builder himself in those spheres of site organisation and production which are his proper province.

Architects' Sign Boards

Approval by the R.I.B.A. Council of sign boards bearing Architects' names to be affixed on building sites.

THE COUNCIL of the Royal Institute have given approval to the recommendation that members should, wherever possible, make use of a specially designed standardised sign board on all building jobs. They consider that the repetitive value of such boards will provide excellent publicity for the profession and indicate to the public the large number and variety of jobs on which members are engaged.

After considerable research it has been agreed that the most satisfactory board for this purpose is one measuring 20 in. by 32 in. made of plastic liner $\frac{3}{16}$ in. thick with a stoved enamel finish and eyeletted for easy fixing. The top half of the board will carry the R.I.B.A. badge and the word 'architect' or 'architects' in grey on a white background while the lower half will carry the name of the architect or firm and the address in white lettering on a dark green background. Sufficient space has been provided on the lower half for affixes after the name and for the address. Although the illustration shows the name of a firm and an address which occupies only two lines, a total of three lines can easily be accommodated by a slight adjustment of the layout.



The word 'architects' is grey on a white ground; the name of the firm is in white lettering on a dark green ground.

The boards can be obtained from The Lettering Centre, 61–63 Borough Road, London, S.E.1, who will undertake to do a layout of the name and address for each architect ordering a board and will sign-write the name and address as agreed in standardised lettering. The charge for this, including package and despatch, will be as follows: Single board, £6 3*s*.; Four boards, £5 1*s*. per board. Eight boards, £4 13*s*. per board. Twelve boards, £4 6*s*. per board. There would be a small additional charge where the name and address occupies three lines instead of the normal two.

The boards are intended for use independently on smaller projects and in conjunction with composite boards embodying general and sub-contractors' names on larger projects. In the latter case members are advised to collaborate with the general contractor, and where necessary the client, and to design a composite board embodying the R.I.B.A. board in a suitable and dignified position. A prototype of the board can be inspected at the R.I.B.A. on application.

Norfolk Architecture

Some buildings to be seen in the Conference district

Gate House, Great Barsham

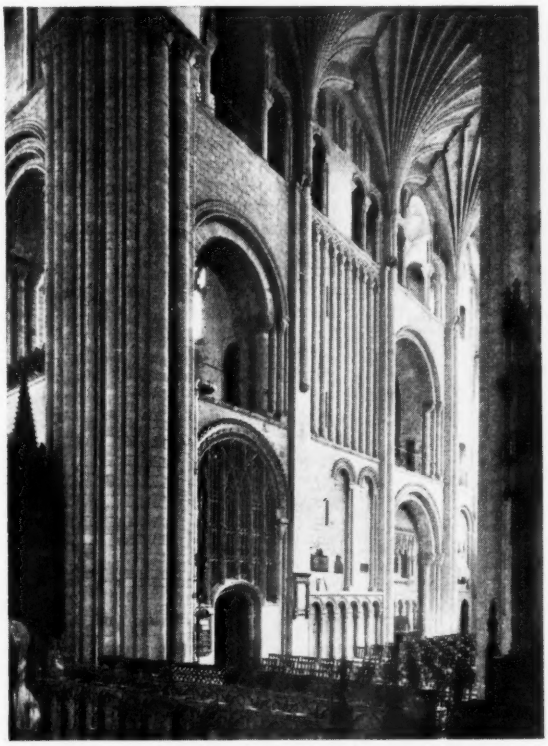
Houghton Hall

Market Cross, Wymondham

Castle Acre Priory

Market Place, Swaffham

Potter Heigham Bridge



Top and bottom left: Norwich Cathedral from north-east, and east wall of south transept. Top right: Blickling Hall. Bottom right: Holkham, grand stair

[*Photographs: Herbert Felton, F.R.P.S.*

The R.I.B.A. Annual Dinner

Held on Friday 6 April, at the Guildhall, London

The President, Mr. C. H. Aslin, C.B.E., in the Chair

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., Vice-President, proposing the toast of The Right Hon. The Lord Mayor, The Corporation of the City of London and the Sheriffs, said: It is an honour and a very pleasant duty for me, on behalf of the Royal Institute of British Architects, to welcome you, my Lord Mayor, to our table, and to thank you, Sir, for the use of the Guildhall here in London: this magnificent chamber, so beautifully restored by Sir Giles—this historic chamber here in London, this metropolis that we all love and of which you, my Lord Mayor, are the first citizen. I think you will agree with me that not only are you the first citizen but also the first servant. We as architects of course consider ourselves also servants of this great city, and I may add that we are willing to be greater servants in the future if given that opportunity. The architect is the leader of the building team, for it is his plans that are the blue print for building operations. He is the 'go-between' between the client—the chap with the cash—and the builder—the man who puts the building up. This is a great responsibility as the architect must represent in his design the practical requirements of his client and if possible keep within the budget.

History shows that through the mirror of architecture we see our forebears, and when a catastrophe befalls the City of London, like the Great Fire, the mirror is a large one and we can therefore see with clarity the Georgians who lived here in the 18th century, and we can appreciate the genius of Sir Christopher Wren who gave us St. Paul's Cathedral and the City churches. There is no doubt that the generations yet unborn will see us through the mirror being provided now in the City of London. We too have had a great catastrophe. During the last war vast areas of London were wiped out and it is the task of this generation to put that part of London back. What will our children's children think of us? This is a sobering thought and along with opportunity comes a grave responsibility. We have a devastated area round St. Paul's Cathedral, and as an architect I cannot help thinking of the problem which is confronting Sir William Holford. I know that lots of architects will agree with me that the best way to dissipate the vitality of a great building built in a different age from ours is to surround it with imitations of that age, exactly in the same way as if one had a diamond one would not set it in a cluster of cut glass. I know that if I had two priceless Chippendale chairs—which I have not got, alas—I would not lose them in a welter of imitation Chippendale chairs.

The Great Fire presented the opportunity of creating a setting for St. Paul's Cathedral. Though the Cathedral was built and survived miraculously this last war, the opportunity of laying out the precinct was missed. I say now, let us think in a truly traditional way and let us grasp this opportunity with courage, imagination, sensitivity and invention—all British characteristics that have been expressed in the past by a long line of buildings. Let us build in our own time and provide a mirror for the generations to come to see us clearly in the best possible light. Though I am speaking personally, I believe Sir William Holford has provided a sensitive English setting to St. Paul's which is far more in The Tradition than any imitation could ever be because one must realise the simple fact that our forebears were not imitators of past styles but courageous and inventive discoverers. This, Sir, is our tradition—let us look at the Holford Plan in this light.

The Right Hon. The Lord Mayor of London (Mr. Alderman C. L. Ackroyd), responding, said: The Civic Toast which has been proposed by Mr. Basil Spence makes us realise the warmth of your welcome. Your Institute is meeting here tonight in this famous and historic hall where kings and queens and princes and nobles are entertained. I hope that you all are quite happy and comfortable and I do hope that you approve the design of the architecture of the new roof of Guildhall which you see above you and which as you know was executed by one of your eminent members, Sir Giles Gilbert Scott.

I have been privileged to have had the friendship of many members of your profession, including a very dear friend of mine, Sir Banister Fletcher, one of your most distinguished members and a Past President, whose book I am sure will go down to history as a great contribution to your work.

With regard to the Corporation of London, how much could one say about that great institution? As you know, for a thousand years cities and Parliaments in this country and throughout the world have taken their pattern and model from the government of the City of London, and I am glad to record that it is in good case and very good health at present and most considerate to the present Lord Mayor. The members of the Corporation have provided many distinguished architects who have given valuable services to the City in the past and on that account alone I am delighted to welcome you all here in Guildhall tonight. As for myself, I am most interested in the work of your great Institute and in its efforts to rebuild the City better than before, but as Lord Mayor I take no sides in the Barbican or the St. Paul's scheme. I am sure the wisdom of our Corporation will see to it that the dignity and strength of this great commercial city will be upheld in whatever plans may be adopted. We must always bear in mind, I think, that we are the trustees of a great tradition, in that the greatness of London was built up on commerce. That must never be lost sight of in our day and generation and we must build for the future so that this City once again may grow and go from strength to strength in the years to come.

As for the Sheriffs, I do not know whether I am supposed to mention them or not since your Vice-President, in his enthusiasm for architecture, did not say much about them, although he certainly did a little better than Professor Richardson, who proposed this toast the other night and never mentioned anybody!

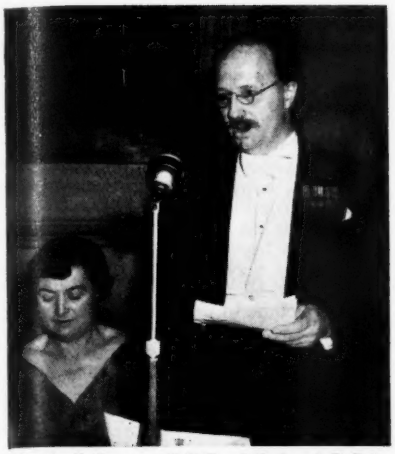
Mr. President, I wish you and your Institute God-speed and every success in the years to come.

The Right Rev. and Right Hon. The Lord Bishop of London, proposing the toast of The Royal Institute of British Architects, said: For the last six years or more, as Bishop of Guildford, I was concerned with a cathedral which would not go up and, like all others in my profession, I am concerned with churches that will come down. In addition to that, at the present moment I am invited to live in a house which is quite uninhabitable and likely so to be for a year or more, what time members of your distinguished profession shall I say 'amuse themselves' by their operations on it.

Perhaps I might just say in passing in reference to that cathedral of which I spoke, that something is happening there and it is going up at the present time, and if any of you are passing that way I do strongly recommend you to go and look because though, as I say, I am a complete ignoramus in these matters, I do believe that it is going to be a perfectly lovely thing.

Your profession is one, of course, of immense importance to all of us and we view it with the greatest respect, and with some commiseration, for after all many of the errors that the rest of us make are buried with us and are soon forgotten but some of the things that you leave behind you remain for a very long time and your names are not altogether likely to be forgotten. In some cases, of course—in many cases if not in all—they are remembered with respect and admiration and only perhaps here and there with, shall we say, just a word of criticism that passes from time to time.

It was in order that these high standards that you have maintained all these years should continue, increase and flourish that the Institute was founded, and therefore I and all other non-architecting individuals wish every possible prosperity to your Institute, that you may maintain these high standards that are set before you and that your work will prosper, and that you will leave behind you memories and memorials for which the generations to come will bless you and reverence your names. I



Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., Vice-President, proposing the toast of the Lord Mayor, the Corporation of the City of London and the Sheriffs

therefore have the greatest pleasure in accepting the honour that was conferred upon me of proposing the health of the Royal Institute of British Architects: may it continue long and flourish abundantly.

The President: I am extremely obliged to my Lord Bishop for being so charming in proposing this toast.

It was the Lord Mayor who mentioned an old friend, Sir Banister Fletcher—we have all got him on the bookshelves. I remember years ago my daughter said 'I thought he was a myth because he has been in the household for so long', but he was not a myth and we still have his books and shortly I think we are going to have a new edition.

I think it is particularly appropriate that the Royal Institute should be meeting in the City this year when you consider the amount of building which is proceeding or about to proceed within the square mile. Before making any comments on the architectural work in the City I may perhaps be allowed to refer to another undertaking which is of such vital interest, not only to architects but to the Church and the country generally, and that is the re-building of Coventry Cathedral. The building was recently 'launched'—I am sure that is an improper word to use for a monument which it is to be hoped will be stable for a long time—by Her Majesty the Queen, who, I am happy to remind you, is also the Patron of the Royal Institute. I am sure my friends here will allow me to take the opportunity of congratulating Mr. Spence on the structural beginning of this great undertaking, congratulating him on its inception, and wishing him God-speed in its completion.

The Lord Bishop of London, who proposed the toast of the R.I.B.A., talking to Mrs. Aslin

To return to London, I may perhaps say a word about Sir William Holford's bold and imaginative scheme for the precincts of St. Paul's. He has had to deal here, as you know, with an extremely complicated planning problem and the one thing which is certain is that any solution will not find universal acceptance. Indeed, the conditions are very much the same as those with which Sir Christopher Wren had to deal after the Great Fire. We are apt to think of Sir Christopher having an easy passage after the production of his plan for London and his great Cathedral, but you can imagine the battles he had to fight with the 'die-hards' who looked upon the classic form of St. Paul's as a foreign intrusion and hoped he would go back to a Gothic conception. Fortunately we never go back; we always go on.

Similarly, Sir William and all those architects who are fortunate enough to be engaged on individual buildings can look forward to a hard passage for any scheme, but I am quite sure that the City Corporation and the London County Council will give the proposal the sympathetic and serious consideration it deserves. It would be out of place for me to attempt to comment in detail on the proposals, particularly as the scheme is at present under consideration, but I may perhaps be allowed to mention the comments which one so constantly hears on the kind of buildings which are proposed in the City and indeed elsewhere—'Egg crates on end'; 'Packing-case architecture'; 'Bankers' classic', and so forth.

Now, as opposed to the idea of the President of another very august body who I am sorry to say is not with us tonight, the Royal Institute does not attempt to dictate on matters of architectural style. We comprise in our many thousands of members architects of greatly differing views, and it would ill become us to attempt to prescribe that all of them should design in any particular manner. One of our main purposes is to attempt to ensure that competent architects are engaged particularly for buildings of the importance of those which are being erected in the City. Having said that, we are perhaps old-fashioned enough to think that the person who pays the piper should have some little say in calling the tune.

Skilful architects can often wean a client from wrong-headed ideas and possibly in the long run get him to think favourably of the clean lines of modern architecture as opposed to the swags and trimmings of the older buildings which are rarely or ever so

The President, Mr. C. H. Aslin, C.B.E., responding to the toast of the R.I.B.A.

pleasant to work in as the more light and airy buildings of today. If in the end the client says 'No' and he wants such-and-such a building and those who give planning consent are prepared to allow it to be built, then it must be for the architect to wrestle with his conscience and to decide whether it is possible for him to produce that particular kind of building. If his conscience says 'No' then he must obviously give up the commission.

I would then suggest that neighbourliness is a thing which is tremendously important and should be striven for. This does not mean, in my view, that a new building being put up next to an old building must copy the old one, but architects will know what I mean when I say it should not be unmannerly. This is obviously one of the things which the Town and Country Planning Act was intended to take care of. The only other thing which I would like to say on this point is that I hope we shall still try to preserve some sort of British tradition and that people who visit this great City in the future will not mistake it for any of the other great capitals of the world. It appears to me that this is where Sir William's plan is leading.

I thought it well to say these things in case it should be thought that the learned Professor to whom I referred a little while back should be taken as speaking for the profession as a whole. I doubt, in fact, if he is speaking for the majority of the architect members of the Royal Academy. That is not to say we do not enjoy his frequent outbursts, but it is to be hoped that the public do not take them too seriously.

The R.I.B.A. is a lively body with its full share of problems in the changing world in which we all live, and even if there was a tendency that way there would be no possibility of those of us who have the responsibility for guiding its policy

sitting back and appearing complacent or self-satisfied. I hope that I am not wrong in believing that the R.I.B.A. is held in high regard. This has been amply illustrated by the great hospitality and numerous acts of kindness shown to me as its President not only by the City Corporation and many of the ancient City Livery Companies but also by our kindred institutions and the various bodies which comprise our many-sided building industry, and I am very happy to see here this evening numerous representatives of those bodies.

Then I have had the privilege of visiting the majority of our Allied Societies throughout the length and breadth of this country. These are vigorous bodies which have their own views on the various problems which confront us and which they do not hesitate to express—emphatically not 'yes-men'. But over and above this they have a great loyalty to the Royal Institute of which in fact they are a very vital part. The R.I.B.A. has long ceased to be a small exclusive London society. Our Council represents every part of the country and includes representatives of the great Dominions overseas. In fact I think we can fairly claim to represent the architects of the Commonwealth. It is one of my few regrets that it has not been possible for me during my Presidency to visit our overseas Allied Societies but I am glad to know that plans are in prospect for my successors to do so and thus cement and strengthen the bonds which exist between us.

Apart from the Commonwealth countries we have close ties with our professional colleagues in the international sphere. Our visitors at the Royal Institute comprise architects from every part of the world and we are always delighted to see them. Quite recently we had a Committee of the International Union of Architects meeting in London and I was happy to meet again colleagues whom I had previously met at the Congresses of the International Union held in Lisbon and at The Hague. This getting together can do nothing but good and I am sure we have a great deal to learn from each other.

I hope that you will forgive me if I take the opportunity of expressing my thanks to a number of people without whose kindness and help it would have been quite impossible for me to have taken this office with which I have been honoured by my colleagues.

I owe a considerable debt to my colleagues on the R.I.B.A. Council for the continuous and delightful support which I have received from them during my term of office. And I am sure my many friends appreciate the enormous support which has been afforded to me by my wife.

My Lord Bishop mentioned that architects are not able to have their mistakes buried with them, but just as when people forgot to hate the new St. Paul's it became a much admired building, so I think in time we shall have a new body of people who will like some of the works we have done, and I am sure under the sod or in heaven we shall enjoy that.

Sir Lancelot Keay, K.B.E., M.Arch., Past President R.I.B.A., proposing the toast of Our Guests, said: I have to try to express the thanks of the Institute to all those who have graced our table tonight, but I could not help noticing when that list of guests was sent to me it was in alphabetical order, which is a very good way of getting out of the order of precedence, so I am not going to fall into the trap; I am going to take one here and there and I hope I may be forgiven if precedence goes to the wind.

Mr. Basil Spence has dealt with the Lord Mayor and the Sheriffs, and following the Lord Mayor I suppose one should go down the list of the Corporation and mention first of all Mr. Charles F. Glenny. He is the Chairman, I believe, of one of the oldest and certainly the most important committees of the Corporation, and by virtue of that office enjoys the very distinguished title of Chief Commoner. We are very happy to have with us His Excellency the French Ambassador, M. Jean Chauvel, from whose country we benefit much and with whom we shared adversity.

Within a mile of where we sit tonight is a building within whose walls and outside many distinguished people lost their heads for the greater security of the State. Many of their descendants today are losing their homes for the benefit of the Welfare State. Whichever of the two blows was the more painful I am not in a position to assess, but I suppose those who have lost their homes may find some consolation in the fact that they pass to the National Trust and they probably come within the management of the Historic Buildings Committee or the General Purposes Committee which is presided over by that ever-juvenile President, Lord Esher. There is the Bishop of London, recently enthroned in that splendid Cathedral of Sir Christopher Wren's with all the traditional ceremony and ritual of the Church; the Chairman of the London County Council, that enormous body, to preside over which must take almost a superman, and also his newly appointed Clerk, Mr. W. O. Hart, to whom I am sure we all wish very great success.

We have with us tonight the Presidents of those Institutions with which we are so closely connected: the Institution of Civil Engineers, the Royal Institution of Chartered Surveyors, the Institution of Structural Engineers, the Law Society—who help us when we get into trouble—the Land Agents Society, the Chartered Auctioneers and Estate Agents Institute—who sell us up—and then the Institution of Electrical Engineers, and I single them out because I think we can look to the electrical profession as being able in the future to do some unheard-of things for the benefit of mankind.

We have other distinguished guests tonight: Mr. E. F. Muir, the Permanent Secretary to the Ministry of Works, with whom as architects we deal so much. The President of the Institute of Builders, the President of the London Master Builders Association, the President and Director of the National Federation of Building Trades Employers. We have Sir Richard Coppock, Mr. Bryan Westwood, the President of the Architectural Association, which I always regard as the 'nursery' of the R.I.B.A. We are happy to have with us the Chairman and Registrar of the Architects Registration Council of the United Kingdom; Mr. Ian Leslie, the Editor of THE BUILDER, who is always fair and constructive in his criticism and helps us at times because he knows we cannot advertise by very kindly putting some of our wares in his paper.

Then I come to the only lady that I am going to mention by name, because I am sure all those ladies accompanying our distinguished guests tonight will realise that when I spoke of their husbands I included them. I just want to say we are very pleased to see Miss Solly here. I am quite sure that we none of us fully realise the size of the task she has to face, and how much easier we could make it if we just had a little more thought.

The only other guest that I shall mention is the distinguished guest who is to reply to this toast, Sir Cecil Wakeley.

Sir Cecil Wakeley, Bt., K.B.E., C.B., M.Ch., D.Sc., F.R.S.(Edin.): I have been entrusted with an important task tonight, and when I received the invitation to reply to the toast 'Our Guests' I wondered why a mere surgeon should be chosen when we have so many distinguished visitors who could reply much better than I. I thought it might be that I have to do with human architecture. We all know that the architects have their troubles and delays in trying to get their buildings up in time, but how different it is with the human body. For instance, in the first part of the human building programme it only takes nine months, and there are very rarely any delays. Yet you can take credit that you can build a row of houses all similar in architectural design and character, because in the human being it is far different. Even when you have the same raw materials the offspring are never the same—in fact they are often far different.

I know I am speaking for all the guests tonight when I say how much we have enjoyed your hospitality in this truly wonderful Guildhall. We are all so pleased to see the City of London's hall now again repaired and with a new roof, and with the Arms of the City Companies adorning its walls. When we come down to brass tacks, it is hospitality and friendship which matters. I recall that story of Sir James Barrie, that one night he went into the Athenaeum and bumped into one of the old gentlemen. He apologised, and he was rather surprised when the old gentleman took him firmly by the hand and thanked him profusely, saying 'Sir, thank you very much for those kind words; I have been a member of this Club for thirty years and you are the only person who has ever spoken to me.'

On behalf of all your guests I would thank you very sincerely for a truly wonderful evening.

Housing Subsidies Bill

Correspondence Exchanged between the R.I.B.A. and the Ministry of Housing and Local Government

LETTER FROM SECRETARY, R.I.B.A. TO PERMANENT SECRETARY, MINISTRY OF HOUSING AND LOCAL GOVERNMENT

9 February 1956

Dear Dame Evelyn,

HOUSING SUBSIDIES BILL

At their meeting on Tuesday, my Council had before them a report from our Town and Country Planning and Housing Committee on certain aspects of the Housing Subsidies Bill, which is now before Parliament.

There are two matters which are causing some concern to the profession and in which they fear that the provisions of the Bill may prove detrimental to the best possible solution of the problems of rehousing and redevelopment.

My Council would like to draw the attention of the Ministry to the present weighting of the scale of subsidy against three storey development. This will have a certain limiting effect on architectural freedom in the design of mixed development schemes of houses and flats, especially in slum clearance areas, and they think that it would be of great benefit to the country if the scale should be related to current building costs and so avoid showing a financial bias in favour of any one type of development against another.

The second matter which is causing concern is Clause 11(i) of the Bill. It seems that replacements of fit houses that have to be demolished along with unfit houses in order to permit comprehensive redevelopment do not qualify for the increased slum clearance subsidy. This is likely to be a temptation to leave an area not completely cleared, which will operate against the proper replanning of that area.

My Council would be grateful if these matters could be given urgent attention during the Committee stage of the Bill.

Yours sincerely,

C. D. Spragg
Secretary

Dame Evelyn Sharp, D.B.E.,
Permanent Secretary,
Ministry of Housing and Local Government,
Whitehall, S.W.1.

REPLY FROM MINISTRY OF HOUSING AND LOCAL GOVERNMENT

Whitehall,
London, S.W.1
13 February 1956

Dear Spragg,

HOUSING SUBSIDIES BILL

The Secretary has asked me to reply to your letter of 9 February addressed to her about this Bill.

As the Minister has made clear in Debates in the House, the new rates of subsidy are not related to any particular level of building costs. They are intended, however, so far as this is possible, not to weight the scales in favour of one particular form of development as against another, though this result cannot be obtained with absolute precision because of the wide variation in building costs, particularly in costs of flats in different parts of the country.

You also refer to the replacement of fit houses. This point was debated at length during the Committee Stage of the Bill (Hansard 31 January, Col. 764 *et seq.*) and I would refer you to that Debate, where the Minister's reasons were given in full for the policy followed in the Bill.

Yours sincerely,

J. E. Beddoe

C. D. Spragg, Esq., C.B.E.,
Royal Institute of British Architects.

LETTER FROM SECRETARY, R.I.B.A. TO MINISTRY OF HOUSING AND LOCAL GOVERNMENT

23 February 1956

Dear Beddoe,

HOUSING SUBSIDIES BILL

I submitted your letter of the 13 February to the Executive Committee of the Council and also informed them of the statement made by the Minister, as quoted in the extract from Hansard which you mentioned.

With regard to Clause 11(i) of the Bill on the replacement of fit houses, whilst the desire of the Minister (on the grounds of finance and immediate housing shortage) to avoid encouraging the demolition of fit houses is fully understood by the Royal Institute, we feel, nevertheless, that the means of achieving this—by the disqualification of fit houses adjacent to slums from the higher subsidy—may dissuade many local authorities from preparing comprehensive plans for the redevelopment of their slum areas.

In the interests of redeveloping the outworn central areas of towns and cities, so long left untouched, to standards of architecture and layout worthy of comparison with the best examples of other countries, the Royal Institute would greatly appreciate an assurance from the Minister first, that he will give every encouragement to local authorities to proceed with plans for the comprehensive redevelopment of their slum areas, even if these plans may in practice have to be carried out a piece at a time, and secondly, that as soon as conditions of finance and the availability of houses permit, the distinction in subsidies between fit and unfit houses within areas which can generally be classified as outworn will be eliminated.

It is felt that an announcement to this effect by the Minister would do a great deal to allay the fears of those who feel that the new Bill perhaps gives more emphasis to the demolition of slum areas than to their reconstruction.

My Committee feel that this is a matter of great importance, on which the Council should make its position known to our members, and they have therefore asked whether the Minister will have any objection to this correspondence being published in the R.I.B.A. JOURNAL and the architectural Press.

Yours sincerely,

C. D. Spragg
Secretary

J. E. Beddoe, Esq.,
Assistant Secretary,
The Ministry of Housing and Local Government.

REPLY FROM MINISTRY

7 March 1956

Dear Spragg,

HOUSING SUBSIDIES BILL

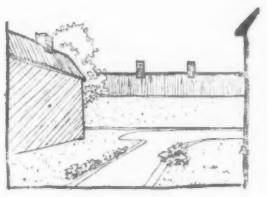
Thank you for your letter of 23 February.

The Minister, of course, wishes local authorities to carry out the proper redevelopment of slum areas. In this connection I would draw your attention to the statement made by the Parliamentary Secretary during the Debate on February 14 (Hansard, Col. 2240): 'I have explained that the Bill in no way prevents, debars or inhibits a local authority from proceeding by way of redevelopment areas under the principal Act, which is the Housing Act 1936, or by comprehensive development under the Town and Country Planning Act. What it does do is to decline to put a premium in the year 1956 upon the demolition of areas of fit houses in preference to the demolition of areas of unfit houses.'

The Minister has noted the Council's suggestion that when conditions of finance permit, the distinction in subsidies between fit and unfit houses within areas which can generally be classified as outworn should be eliminated. I am sure you will understand that the Minister cannot make any announcement about future subsidy policy, but you may be assured that he will bear the Council's representations in mind at the appropriate time.

Yours sincerely,

J. E. Beddoe



Mistress Parliament

The R.I.B.A. Council in Session

By Ronald Bradbury, Ph.D., A.M.T.P.I. [*F*]

I AM ASHAMED to admit that until my election as a Member of Council of the R.I.B.A. I had not set foot in the Council Chamber at 66 Portland Place and moreover I had very little conception of how the Council functioned or of the atmosphere in which its deliberations took place.

I feel sure that this state of affairs is not peculiar to myself and that there are very many Members who are still as ignorant now as I was then about the Council and its doings. Of course, Council proceedings are recorded month by month in the R.I.B.A. JOURNAL, but it is difficult to obtain from short formal printed reports any very real idea of how the Council goes about its business or how its meetings are conducted. It would not seem inappropriate therefore for someone to describe briefly what the Council Chamber is like or to attempt to bring more to life how the Council works, particularly at the present time when its activities are the subject of so much interest and the decisions which it is taking are likely to be of such vital importance to the future well-being of the profession.

I wish to make it clear however that in attempting to write this article I am adopting the role of an observer rather than a participant and that my sole purpose is to inform.

The Council Chamber. The Council Chamber is on the top floor in the centre of the Portland Place front of the building. It is not, when compared to many debating chambers in which local authorities carry out their business, a very large one. It has a total seating capacity of sixty-one. Indeed, one's first impression as one enters it from the ante-room is one of cosiness and compactness. The Chamber is just under 40 ft. long and about 24 ft. wide. When one enters from the ante-room one is on its long axis with the top dais, raised some 18 in. or so above the general floor level, running the whole length of the left-hand wall with the richly carved Presidential chair in the centre. The seating for members is arranged around a central well in groups of five, four and three seats. The centre of the well is occupied by a table used by the secretarial staff who record the debate.

As a result of great care in the acoustic treatment the room is extremely well insulated against traffic and other noises. There are no windows in the wall towards Portland Place, but side lighting has been obtained by raising the ceiling level and providing clerestory lighting on the north and south narrow ends of the room. Although the window area relative to the floor space is small, the lighting is surprisingly efficient. The room is air conditioned, warm and washed air being delivered over the projecting cornices to the east and west wall recesses. The extract system operates through gratings under the seating although there are additional concealed ceiling and floor panels. The artificial lighting is supplied by sixteen special mirrored reflectors from the cornices which give an even distribution of light over the ceiling.

The Chamber displays the same elegance in its proportions and in its detailing which characterises the remainder of the building. The joinery, which is of fine craftsmanship, is in three kinds of walnut of different figure and colour. The longer sides of the room are covered with flush veneered panelling of English walnut. The desks and seat backs are executed in the same wood. The pairs of doors at each end are of Australian walnut with raised and fielded panels in Australian walnut and figured Canadian maple. The Presidential chair is of Quebec pine. These materials have aged well and have a pleasant patina of use about them which contributes considerably to the Chamber's feeling of intimacy and cosiness.

On the day of a Council meeting, normally the first Tuesday in each month, the Chamber fills up gradually and informally as members wend their way up to it from the Club lunch in the foyer of the Henry Jarvis Memorial Hall or arrive from their place of business. There are no set seating arrangements; theoretically, apart of course from the top dais which is reserved for the President, the Officers and Vice-Presidents, Members can sit anywhere they choose. But tradition is strong and various Members have their favourite back benches or corner seats. Scottish representatives, for example, seem to have laid claim to the front bench to the left of the dais. There they are always to be found, ever on the alert to defend Scotland's honour or to do battle for its architectural interests. This informality of seating can cause new Members embarrassment, as I myself found out at the first Council meeting which I attended. I drifted in and took a seat on the right hand front bench because by that time all the rest seemed to be nearly filled up, to find myself flanked by two Past Presidents. Now I normally sit one row back, having learned that by tradition this front row is tacitly reserved for more august personages.

The seating arrangements on the top dais always take the same formal set pattern. Mr. Aslin, the President, occupies with dignity the special Presidential chair in the centre. To his left, in order to be able to whisper advice and information in his ear, sits Mr. Spragg, the Secretary, with Mr. Ellis, the Deputy Secretary, on his left again. On the left of Mr. Ellis sits Mr. T. E. Scott, the Honorary Treasurer, always ready to present financial matters concisely and with the utmost clarity. Beyond him and at the end of the dais is Mr. Basil Spence, alert and smiling, prepared to put aside, in the interests of the profession, for two or three hours his dreams of Coventry Cathedral. On the immediate right of the President sits Mr. E. D. Jefferiss Mathews, Honorary Secretary, who, by virtue of this office as well as his chairmanship of the Public Relations Committee, is called upon to speak on many occasions as is his colleague, Mr. Kenneth Cross, Vice-President, who sits next again and is, as Vice-Chairman, the spokesman for the Executive Committee. The group on the dais is completed by the two further Vice-Presidents, Mr. F. C.

Saxon, Chairman of the Allied Societies Conference, and Dr. J. L. Martin.

Promptly at 2.30 p.m., when all the Officers and Members are seated, there is an air of expectancy as the President calls the meeting to order, and the Council is in Session.

The Order and Conduct of Debate. Members of Council are sensible people and mostly well informed on the subjects for discussion. Although the debates are keen and sometimes hard-hitting, they are fortunately entirely free from acrimony or displays of bad temper. This state of affairs is made all the more possible by the friendly way in which the President presides over the proceedings. Very tactfully he permits a departure from the standard rules of debate where he is satisfied that it is in the interests of full discussion on the subject in question. He is obviously determined that all matters should be fully debated and that the decisions which are reached should be arrived at on a fair and democratic basis, and that everyone who has anything to contribute should be allowed to do so.

A few days prior to the meeting a very large and formidable envelope of documents is received through the post by each Council Member. It is no mean task to read carefully through this weighty pile of documents. First in the packet is the Council agenda, followed by the minutes of the previous Council meeting. The agenda itself starts off with the formal submission of the minutes of the previous meeting, followed by apologies for absence. Next comes correspondence arising from the minutes. Sometimes this is quite a formal matter but at other times it may raise controversial issues which occasion lengthy debates.

Item No. 4 is 'Questions'. Any Member of Council is allowed to submit a question in writing to the Secretary on any matter which he considers comes within the orbit of the Institute's activities. For some reason or another Members appear reluctant to make as much use of this procedure to elicit information or statements of policy as one would expect. Nevertheless, questions can be and are put to the President, who answers them and will permit supplementary enquiries. Indeed, the procedure follows very closely Parliamentary precedent and provides a useful and democratic safety-valve for Members who wish to raise questions on issues which might otherwise not be raised.

Item 5, the report of the Executive Committee, naturally contains a very great deal of the real meat of the Institute's activities. Most matters of major policy, or which are likely to affect policy in one way or another, are sooner or later carefully debated by the Executive Committee, who present all their resolutions and recommendations for endorsement by the full Council. Practically all the major controversial matters which have been raised over the past two years have been the subject of Executive Committee deliberations, either because they have passed naturally into the aegis of that Committee or have been referred to them, with or without debate, by the Council before final decisions are taken, when the subjects raised have been submitted direct to Council by the other Committees. The Executive Committee report is, as is the case with most other committees, supplemented by reports covering the background of the issues under consideration.

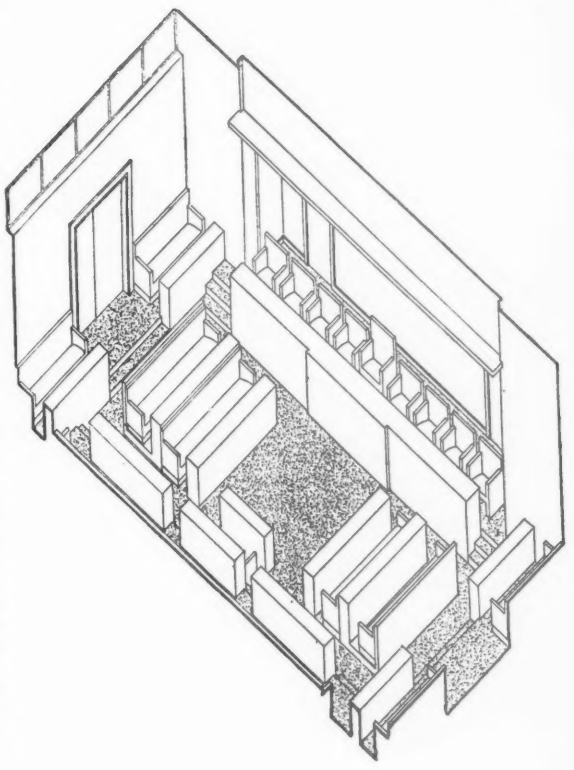
The next item on the agenda is the report of the Board of Architectural Education. And then, although not perhaps so controversial as other items on the agenda, nevertheless obviously of great importance are the recommendations which the Finance and House Committee present to Council from time to time. Just like everyone else, the R.I.B.A. has become in recent months very conscious of the rising costs of housekeeping and maintaining the various services which the Institute supplies to its Members. Naturally opinions are often sharply divided as to the most effective ways of dealing with financial problems or the apportionment of income to the various sides of the Institute's work, having regard to relative priorities. Like everyone else where financial questions are concerned, the R.I.B.A. faces a dilemma posed by the reduced purchasing power of the pound on the one hand and the very natural desire on the other to expand its activities and its services to Members.

Next in order follow the reports of the many other committees of the Institute. Sometimes the recommendations may be quite formal. At other times important policy issues or matters involving considerable expenditure may be involved by the bright ideas which are put forward. For example, the Public Relations Committee has recently been devoting its attention to the ways in which its important propaganda activities may be improved and expanded. Naturally, this cannot be done without increased expenditure.

The candidature of those seeking admission to the different classes of membership of the Institute is dealt with in the item on the agenda 'Election of Members', and the Council is asked to decide whether or not it agrees to their election. Then month by month under the item 'Obituary' the Secretary presents to the Council a list of those Members who have passed on, and Council stands for a few moments to mark the loss which the profession has sustained. Sometimes the list contains only humble names, sometimes it contains the names of the great personages of our profession, many of whom have made a personal contribution to the story of British architecture. Standing thus for a few moments with bowed heads, honouring those who will practise the Mistress Art no more, one is conscious of the proud history of British architecture and its importance for the future well-being and development of the nation.

Normally after the 'Obituary' the rest of the meeting is something of an anti-climax. Formal permission to the use of the Institute seal is given for various documents. Correspondence is received and the agenda ends with that ubiquitous item 'Other Business'. By this time, for it may well be well after five o'clock, Members are looking at their watches or the clock on the wall. If the matters raised in 'Other Business' are controversial or of a type on which factual information is required, they are usually referred to the appropriate committee for consideration and report. This awareness of time is a quite natural phenomenon for at six o'clock on Council days there is normally a lecture or meeting which many Members of the Council are hoping to attend.

Some Final Thoughts. I feel I should like to add one or two personal comments arising out of my participation in Council proceedings as a Member of two years' standing. There is a feeling in some quarters, and one can to some extent understand why it should exist, that the profession is not facing up to the problems



which concern it and talking them over with the attention which they really warrant. In my opinion this is certainly not the case. It is sometimes difficult fully to appreciate the delicacy of some of the important questions which the profession has to ask itself, and the difficulty, with the best will in the world, of finding practical solutions which will meet not only short term but long term requirements. Many of us who entered the Council with what we thought were simple solutions have found that most of them could only be accepted at the expense of other equally cherished traditions. I have been struck on many occasions by the diversity of views expressed and the cogent arguments produced for both sides of an issue. The profession is a delicately balanced organism and it is no use operating on one part of its body if, as a result, some other part of equal importance would wither and die. I believe, too, that the Council as a body always recognises its responsibilities to the profession and that, in reaching a decision on any issue, it has at all times in the forefront of its mind the well-being of the profession as a whole and not merely particular sectional interests.

In describing the Council Chamber I should have recorded the fact that around its walls are hung a number of portraits of famous Past Presidents. These include people like Sir William Tite, Professor Cockerell, Sir George Gilbert Scott and Charles Barry. I have been wondering what these gentlemen would think about the complicated professional and technical matters which are discussed in Council today. I feel sure that they would decide that the periods in which they themselves worked as members of the architectural profession were much simpler than those of today, and that they would agree that the Mistress Parliament has a much greater load of responsibility than the governing body of the profession has ever had to shoulder before.

Symposium on the Design of Office Buildings

Held at the R.I.B.A. 12 April 1956

Sir William Holford, M.T.P.I. [*F*], in the Chair

The papers read at the Symposium, and the discussion, are here briefly summarised. A full report will shortly be available at the price of 10*s.—Ed.*

Sir William Holford, in his paper on **The Setting of the Office Building in Cities and Urban Areas,** said there was no doubt that it was cheaper and easier to accommodate a given number of people in horizontally planned buildings on the outskirts of a town, or even in the middle of a suburban or residential neighbourhood, than vertically in the central area of the city itself; and sub-central locations are thus quite often a matter of deliberate choice and to some extent of necessity, because floor space in central areas would be limited to what the town as a whole could economically support, especially in terms of transport and other services, involving calculation of private and public costs, the state of the labour market, the pros and cons of the journey to work, linkage with other commercial activities, and the desirable standards of accommodation and services.

In England it seemed likely that the prototype of the horizontal office building was the collegiate form of building, with a number of similar cells grouped round a cloister, and a corridor or stairway; a tradition continued by the Inns of Court where they had space to do so. In congested places such as the City of London, merchants, bankers and craftsmen lived over their shops and counting-houses, a form of development which by a later generation of town planners has been anathematised as one of 'mixed uses'.

The influences at work on the form of what is now called the office block were, first, the economics of mass production—more people were needed to perform a greater range of routine services, and this could not be done with the care an owner-occupier would lavish on his house; frills and niceties were therefore cut out and the office building began to emerge as primarily a utilitarian structure. Then the need for better daylight and ventilation, circulation, storage, managerial privacy, and staff supervision, followed by developments in structure and services, lifts, fire protection and central heating began to influence the shape and scale of the office building. Double banks of rooms on either side of a corridor superseded the sets of chambers and single corridor on an individual staircase. Two restrictions however prevented the logical development of the new plan form: the limitation in height and the retention of the 'palace' façade.

In the suburbs and outskirts the amount of curtilage actually covered by the building could afford to be less and car-parking spaces could be provided. Against the advantages of spacious planning on moderately cheap land must be set the disadvantages of isolation.

Reasons given to justify new or extended building in the City and central London by Government Departments, nationalised undertakings and the larger private firms include the advantages of having the entire staff under one roof, of nearness to commercial, financial or communication centres, linkage with similar trades and convenience of location for buyers.

In the report on 'Reconstruction in the City of London' a simple ratio of total floor area to total site area, called the 'plot ratio', was recommended, and as in 1939 the average plot ratio was 5 to 1, that was made the upper limit, with a relaxation of 5·5 to 1 in certain sectors. It may be that for piecemeal development of individual sites in London the plot ratio should have a slightly lower limit than it has now and that a higher ratio should be accorded only to plots designed to form part of a larger scheme, the ratio being averaged over the whole.

From the public point of view, circulation and parking demand a reconsideration of present practice. Recent requirements by the London County Council call for one car space within the curtilage for every 2,500 sq. ft. of new office space. Sir William had come to the conclusion that a small car park under each office building was neither economic nor efficient.

The need for economy and compliance with regulations so condition the setting for the central office block that questions of architectural design, silhouette, scale, decoration and material do not always receive the consideration they deserve, yet in terms of civic design the office block is the type building of the 20th century, and if it is regarded as purely utilitarian and not worth architectural thought and care, the future of the centres of our cities will be blank indeed.

The Clients' Requirements was the subject of the paper by **Mr. A. N. Marr,** A.M.I.C.E., A.M.I.Mech.E. He said that if central London firms were to move their offices outside the congested central area, as suggested by the Minister of Housing and Local Government, a larger number of future projects could be planned in more generous surroundings and any distinction between the speculative and the industrial office might become less obvious.

In the city office deep space is often necessary because of the need for a return from the investment on a restricted site, but there was little justification for deep space in an industrial project. It was generally felt that a maximum office depth of 20 ft. was desirable, but many people thought that was excessive. A depth of 14 ft. is often enough to provide a large number of small rooms, but there must be few buildings where only small rooms were required and a depth of about 17 ft. seemed to be a good compromise for a general office with varied user requirements.

Some clients required merely a large enclosed area where the activities of all departments could take place, with certain space partitioned off for senior executives, and ideally such a building is of one storey so that it may have top lighting. No matter how open the office, some space must be provided for business of a private nature. Mr. Marr thought that so-called modular furniture, used considerably in the United States, would come more into use as it gave individuals a certain amount of privacy in a large room. Interviewing could take place in or near the entrance to the building.

There was a case for providing means of vertical circulation, to save walking long distances on the level, and in this connection the paternoster lift had advantages, provided that there were also conventional lifts for visitors, persons carrying loads, and those of the staff who were lame.

The need for flexibility led to the problem of demountable partitions, which were more expensive than the in situ type, and where a floor could be planned for a particular purpose not likely to be altered it was better to use more traditional materials.

After dealing with inter-communication, mechanical aids, accommodation, comfort and welfare, Mr. Marr went on to speak of building requirements, and stressed the need for reducing the fire risk to a minimum. An early decision would be required on the methods of fire detection and fighting to be provided, and the methods of consultation with the county fire officer or the Fire Offices Committee needed more attention from the administrative point of view during planning and design.

Functional efficiency was not enough, dignity and beauty were also required.

Mr. H. Fitzroy Robinson, B.A.(Arch.) [*F*], in his paper on **Recent Evolution of the Office Building, including United States Practice; the Architects' Design Problem,** said that the average office building is essentially a commercial undertaking and must be regarded as such, whether it is a speculative venture or for owner occupation, its success being measured in terms both of the quality and quantity of working space in relation to the capital cost translated in terms of annual rental, but this was no excuse for the sacrifice of good taste in the interests of providing the maximum rentable floor space.

In the late twenties and early thirties, outside densely populated areas, manufacturing and sales methods were creating a need for large administrative offices at factories, usually constructed as part of the factory building and placed on the road frontages as a façade to mask the factory block behind; they therefore took the form of long horizontal blocks.

In towns in Britain, principally in London, the shape of buildings was governed by various considerations; the London Building Act limited the height to 80 ft., with two additional storeys in the roof. Town planning regulations required buildings to be contained within certain angular limits set up from the opposite sides of the street and from the site boundaries, and this often resulted in a series of setback storeys reaching to the maximum permissible height. The external mass and shape was also limited by town planning requirements, permitting varying proportions of the site to be covered at different heights above ground level, according to the zone. The provision of natural lighting to the interior played an important part in determining the external shape. These factors led to buildings with their main façades conforming to the street boundaries, with interior and closed courtyards, the breakaway from this closed light-well plan occurring in 1928 with the building of the London Passenger Transport Board headquarters in Broadway.

In the United States the general problem was the same as ours though different limitations and conditions applied. In New York the contours of buildings were governed by height zoning regulations, permitting a maximum sheer height on the site boundaries, related to the width of the streets, considerably in excess of that permitted in this country. The result was normally a solid mass of building in the lower storeys with large areas of floors having little or no daylighting, above which were storeys receding in size and surmounted by a tall tower structure rising to an unlimited height. The economics of these towers, in terms of capital costs in relation to usable floor space, showed that the point at which the tower was no longer a practicable proposition occurred somewhere between the 30th and 35th storey, therefore the height of buildings has tended to decrease. In the States the lack of natural lighting had been accepted as a normal condition, but in 1932 there was a move towards better daylighting, when the Philadelphia Saving Fund Society building was erected. Since the war the slab or 'matchbox-on-end' form of structure has tended to supplant the tower, but while giving better daylighting standards on restricted sites it cannot provide the density derived from the tower plan.

The design problem in Britain falls into three main categories; first, those which influence the massing or shape of the building, such as the accommodation requirements, permitted size of building, daylighting, the window module, and the structural possibilities. The second category concerns the internal arrangements; placing of entrances, lifts and staircases, use of ground-floor space, car parking, vehicular servicing of buildings, and methods of heating, mechanical ventilation and air conditioning. The third category includes office partitions, siting and number of lavatories, canteen, sound, utility services and communications, and other special clients' requirements.

Too much thought cannot be given to the question of landlords' and/or occupiers' maintenance, which invariably involves the occupier in considerable expense in the matter of external painting and cleaning down, window cleaning, and material finishes for walls and floors.

The present trend can be said to demand open planning, giving the best daylighting conditions obtainable. If artificial lighting reaches a high standard of perfection and scarcity of land becomes a serious problem, who knows whether we, like the Americans, may prefer to work in conditions of artificial lighting.

Mr. J. R. Kell, M.I.Mech.E., P.P.I.H.V.E., Mem.Inst.F., read a paper on **Heating and Ventilation.** He said that office personnel will presumably be trained to a higher degree of specialisation than at present in such matters as mechanical methods of accountancy, recording, filing and postal arrangements, the natural corollary being the provision of the most satisfactory conditions of atmosphere and temperature, acoustic treatment and lighting. It may be that planning of offices adjacent to windows will be less necessary, and greater dependence on ventilation and air conditioning will ensue. In industrial cities the opening of windows involves pollution of the atmosphere in the office and soiling of decorations and papers.

Direct heating surface was desirable in rooms to counteract the fabric losses. In recent years the development of heating has been on the lines of bringing it into combination with other elements of the building, such as panel heating by warm water, perforated aluminium ceiling warmed by pipes, warmed air above a translucent ceiling, floor heating either by embedded coils or electric resistance elements. Types of heat emitters not combined with elements of the building included radiators and free-standing convectors, but it was usually considered that such systems were not so economical in fuel consumption as the mainly radiant systems because of the temperature gradients involved.

Systems having small thermal capacity are best controlled by individual room thermostats; the control being at the source in the case of heating equipment having a considerable time lag. There was also heating electrically by night storage units of free-standing types taking heat during off-peak hours.

Speaking on ventilation and air conditioning, Mr. Kell said that if mechanical ventilation was necessary it was a question whether ventilation was adequate or whether air conditioning should be provided. In summer a straight ventilation system would not cool the air and occupants would want the windows open; with air conditioning less fresh air would be required because of recirculation. If comfort conditions were considered to be a necessity they could be guaranteed only by complete air conditioning, and owing to the high cost of sheetmetal ductwork the tendency would be to employ high velocity methods now being used in the United States on a considerable scale. In an air conditioning system cooling could be done either by an under-window unit containing chilled water or by double ducting rising from the central plant.

With the rise in cost of coal and the creation of smokeless zones, the burning of raw coal in boilers was declining, solid

smokeless fuels involved dirt and labour and therefore the choice of a source of heat lay between oil, gas and electricity; oil being the cheapest in running costs with gas and electricity roughly tying with each other. In oil firing the new so-called 'packaged' boilers were of interest, wherein the burner controls and auxiliaries were designed specially to suit the boiler. The office building of the future might be envisaged as containing an oil-fired packaged boiler, heated acoustic ceilings individually controlled, double duct air conditioning with individual room units, insulated walls and roofs, and double windows; any slight initial cost being quickly repaid by efficiency of personnel and general economy of running.

Mr. John Bickerdike [*A*], speaking on **Lighting,** referred to the post-war efforts made to operate a less arbitrary method of controlling the siting of buildings in urban areas than the traditional one based on a simple angle of set-back. The London County Council were now operating a density and daylighting control devised by the Building Research Station and the Ministry of Town and Country Planning, consisting of alternative angular limits, in both plan and section, to govern the shape of the building envelope, thus allowing variety in the shape of the envelope while ensuring reasonable daylighting to neighbouring buildings. The new control provides that all rooms should have some light from a low angle to ensure good penetration.

Good daylighting was only one of several major gains; another was the satisfactory solution of problems such as traffic noise, higher densities, more open space, fire spread and improved internal planning. So far results in practice were disappointing as there were few pieces of development to which reference could be made, although some have found the control to be potentially of great benefit. At present certain basic assumptions and the operation of the control were under review by a working party set up by the Ministry of Town and Country Planning and the Building Research Station.

In discussing the design of office buildings the effect of fluorescent lighting should not be ignored; it can reproduce conditions nearly as good as daylight. The question of deeper offices using supplementary artificial lighting was now ripe for consideration. In a block at Denver in America the 23-storey tower covered only 25 per cent of the site, and some of the clerical spaces were 75 ft. deep. This kind of planning was not feasible before the fluorescent lamp reached its present stage of development. In artificial lighting there has been a move towards high levels of illumination; up to 100 lumens per sq. ft. visual efficiency improves steadily, beyond that is hardly worth while. The Code of the Illuminating Engineering Society recommends 20 l./sq. ft. for general office work; it is likely that 50 l./sq. ft. will be common in a few years; occasionally American practice goes up to 100 l./sq. ft. This phenomenal rise had been made possible by the fluorescent lamp, which gave about three times the light of a filament lamp of the same wattage.

Electricity consumption for the higher levels is formidable; much of the consumption is generated as heat. At 48 l./sq. ft. the heat generated is about 4·5 watts/sq. ft., nearly enough for the winter heating of a well-insulated, closely-planned building. Such a load would cause over-heating in the warmer months. But fluorescent lamps and gear were expensive and here the lighting industry should take heed, for they were in danger of pricing themselves out of the market.

Mr. Hope Bagenal [*F*] spoke on **Noise,** a subject on which complaints among all kinds of clerical workers had increased in recent years. Often they had to work in conditions similar to a factory. Psycho-acoustics tests carried out with a sustained noise were useless, it was interruption to the train of thought that caused fatigue. Office noises from interior sources easily reach 70 db. or more.

The first remedy was to segregate the machines and operators from the administrative personnel by effective partitions carried up to the ceiling. These could still permit supervision, as thick glass in heavy steel frames, kept shut, could give useful sound reduction. Efficient sound-absorbing treatment to the whole ceiling could help typists and operators, also the spacing of machines far apart. The typing pool should be in a small and separate room, with maximum ceiling absorption; in the large general office the direct sound at low level from machines could be reduced by 5 ft. high sound-absorbing screens between individuals; they should divide and enclose on three sides. In large general offices concave ceilings concentrated reflected sound on to the modern hard floor surfaces.

There was a need for an inexpensive resilient floor finish. Linoleum on an underlay could be efficient and would be one answer if it could embody a resilient ply and still be fixed down firmly. Board and batten floors were specially noisy; wood blocks came into a middle class. A rubber strip gangway in general offices and down the centre of corridors was often worth while.

General vulnerability to noise with lack of privacy in office rooms was due to transmission through lightweight partitions, commercial doors and adjoining fanlights. The last should not adjoin, or should be fixed. In cross partitions the thin, jointed type without a plaster coat gave a low reduction factor; noise was transmitted through marginal and sectional joints, as well as by tympanic action. Another cause of noise leakage was sometimes found in the continuous service ceiling with an air space above, which could transmit noise over the partition heads.

Another cause of leakage occurred at junctions of cross-walls with the modern glazing and curtaining; at that point there was always a straight joint. Solid jambs to windows built into the cross-walls dividing off windows was better practice. Flanking transmission must be guarded against by paying the same attention to corridor walls as to cross-walls. But it is useless to take measures about a partition if there is a communicating door.

Although sectional partitions could be improved their insulation value must be low. A higher standard meant higher costing, hence the need to group office rooms into rough classes so that those needing quieter conditions and real privacy could be dealt with together. This involved thicker partitions, not demountable, more solid construction and therefore stronger floor slabs. The more serious complaints of interior noises came from buildings on quiet sites, because there was no traffic background to mask them; therefore when a research association charged with secret developments moved from a city site to the country more care was required in planning and specifying for privacy.

In planning the services it was useless to spend money on 4½-in. plastered brick partitions if trunks, ducts and pipe runs went through them leaving unsealed gaps; main trunks should go along corridors, branches going to each room with a short length of absorbent. As a defence against traffic noises, important rooms in city offices should be placed on the quiet side of the site; lavatories, staircases, canteens, etc., being put on the street front, thus reversing the old social tradition.

If the tower and screen principle in planning was adopted the central area of a city block became a high tower defended by outworks on the perimeter of two or three storeys in height. Central towers, set back, would be a defence against the noise of street traffic, but not against aeroplanes and helicopters.

Mr. Felix J. Samuely, B.Sc.(Eng.) Lond., M.I.C.E., M.I.Struct.E., spoke on **Structures for Office Buildings.** He said that the design of the structure must not fetter the planning and appearance of the building and hard-and-fast rules which would eventually hamper the architect should not be laid down, but the engineer must have the economics of the construction in mind all the time, and if it should happen that a greater capital expenditure in the structure would lead to planning advantages the point should be put squarely to the architect, and possibly to the client as well for him to make the final decision on financial problems. Mr. Samuely then discussed the constructional aspect of some types of buildings.

If staircases, lifts and lavatories were concentrated into specific areas, the office space between could be as flexible as possible. Often there was a central corridor, which allowed the arrangement of one or two rows of columns, but a central corridor defined by two rows of columns might be a planning handicap where complete flexibility was required; for instance, large drawing offices. The type of plan with a corridor along one side of the building was not so much used now, but was found where the front to back dimension was too

small to accommodate double-banked offices.

In the case of a long building with offices on either side of a central corridor, or with no corridor at all, the first structural problem to be solved was the general stiffness against wind. This could be achieved either by having a number of cross frames, each rigid in itself, or by choosing certain specific rigid cross constructions and using the floors as membranes to transmit wind forces to those constructions. The second method was preferable as it was more economical, whether the building be of steel or concrete, and the rest of the building could be designed as a system of columns, beams and slabs, which was cheaper than an abundance of rigid frames.

It was important to keep the width of external columns to a minimum in order to get the maximum amount of light, and architects usually wished the top of the windows to be as high up as possible, and this was best arranged by making the external columns take the place of mullions. With reinforced concrete such columns could be kept down to a width of 5 to 6 in., and as the largest window panes available were about 8 ft. the maximum dimension from centre to centre of mullions would be about 8 ft. 6 in., but planning considerations for the most suitable positioning of partition walls would often require a grid much smaller than that.

Another form of construction had a curtain wall and columns standing just sufficiently behind the wall not to be seen, but the columns were often in the way of the user, a beam was required from column to column, thus cutting down on the window height, and if the columns served as mullions as well the whole curtain wall became a complete addition to the cost.

It was important to span any floor slab from front to back so that no beams projected downwards and partitions could be arranged at any point. The use of prestressing has made long span slabs relatively cheaper and a modern office building can be designed with spans of 25 ft. or even more, but with such slabs the difficulty was the loss of height, particularly where a great number of storeys was concerned.

A special problem often arose when the ground floor of an office building was used for different purposes, such as a restaurant or shops. A smaller number of columns would often be desirable on the ground floor than on the upper ones, and then beams would be required to carry the greater number of columns above the first floor. A deep beam was cheaper than a greater number of shallow beams. As an engineer Mr. Samuely would always like to see this deep beam expressed, although from a practical point of view there was no reason why it should not be clad like the remainder of the wall.

DISCUSSION

Among the points brought out in the discussion were the following.

In this country there is not much information on the population density of office buildings and the population density in relation to the costs of the building or the rental values. In the Empire State Building there was about 80 sq. ft. of rentable space per person. In the Lever building, which was partly a prestige building and therefore more difficult to judge, the figure was about 85 sq. ft. The figure in this country is some 40 to 50 per cent higher than in America. In the City, taking gross figures rather than rentable value, 100 sq. ft. per person was the average planned density, or 130 sq. ft. if canteens, caretaker's accommodation, etc., were included. These, however, were the planned densities, and it was not known what happened when the building was occupied. In America the number of occupants was written up in a corner of the room and it was an offence to put in more than that number. In this country there was nothing controlling the actual occupancy of office buildings.

A commercial building here would never bear the cost of full air conditioning, nor would it be justifiable except in certain rooms or spaces where control of temperature and humidity was essential. Off-peak electricity would undoubtedly come into its own as soon as the Electricity Boards gave proper consideration to the prices.

Very few office buildings had been built in this country since the war and there had been time to consider the problem and come to conclusions. Undoubtedly the major change had been the development of the frame construction; then there was the removal of the maximum height limit, of which the implications were only just beginning to be felt. The daylighting code, plot ratios and the demand for improved mechanical services were other developments. These developments seemed to be leading to a new sort of dullness—the danger of a monotony of elevational treatment and the dullness of bigness. The office building should be treated on a very big scale, but the eye on the ground sees and wants variety at its own level. Mixed development was one possible pointer towards a solution.

Even in office buildings today the use of machinery was increasing and the conditions were approaching those of factory usage, so there was justification for increasing the lighting levels; perhaps a level of 30 to 40 l./sq. ft. was adequate. The penny of today gave 25 times as much light in terms of lumen hours as did the much more valuable penny of 1929, which was not a bad achievement for the lighting industry. But what standards were required and who should lay them down?—not only in lighting but also in boiler installations and air-conditioning. The question was worth investigation, otherwise the costs would block it if all the experts were listened to.

The theme of all the papers read had been that of economics, overriding the technical interest of the problems discussed. Town planning might be able to offer remedies, and the problem of the city centre as a whole was that of centralisation. At present the office population was about 600,000 in central London, where the problem was not that of industry but of employment. There were planning commissions outstanding that might represent an additional 25 per cent on the number of persons travelling into central London every day. Perhaps the plot ratio ought to be revised so as to be on a street block basis which would have regard to local circumstances and thus allow for varying architectural effects in different areas. Town planning, through decentralisation, could have an effect on the problems; it led to a reduction in land values and so the architect would not be pressed to get every square foot of floor space possible on to the site. The right to decide whether or not a high building was suitable on a given site should rest with the planning authority.

For the architect the middle floor was probably the typical one, focusing attention on the external wall and the bay spacing of the windows, assuming that flexible partitions were to be used, which would involve some form of module unit to come up against the windows at regular intervals. Then, what bay spacing from a constructional point of view was economical and correct for the total building function? Judging from the illustrations in the exhibition, the structural bay spacings appeared to vary between 3 ft. and 20 ft.

In one speaker's opinion, putting the structural supports in the line of the external wall was the correct method, which meant choosing between 3 ft. and 20 ft. centres; thus it became necessary to decide at what module the floors were to be planned. There had not been any basic research on what is the minimum office, but possibly between 7 ft. 6 in. and 9 ft. wide was suitable. Unequal bay spacing produced a quite different quality in elevation and was an interesting solution to the question of functional office planning.

The model bye-laws imposed severe restrictions on designers; they ought to be so worded as to leave a loophole for the genuine designer. Fortunately the London County Council allow waivers. Two factors might interfere with the design of a building; the client and the statutory control. Rightly the client must have his say. Why, under plot ratios, should the client throw in a lot of ground which would be for the benefit of the community at large and the people next door in particular? Something should be done to tidy up the administration of legislation.

In summing up, **Sir William Holford** said that the problem facing architects here was whether thick, deep blocks of offices were to be adopted. The over-shadowing of a building 150 ft. or 190 ft. across in both directions was considerable. A really wide slab with a site round it, in perpetual gloom, created a kind of slum area. The right course seemed to be to have the tower throwing its shadow chiefly on its own lower floors.

There would be discussion for many years on what the module for offices should be, but there was a large measure of aggregation of modules round about 4 ft 3 in. or 4 ft. 6 in. up to about 7 ft.

A.B.S. Old People's Dwellings

Architects: Clifford Culpin and Partner [*F/A*]

THE LAUNCHING OF THE CENTENARY FUND for Old People's Homes, its gradual building up by donations and by the receipts from a succession of A.B.S. Balls, the acquiring of a site at East Horsley in Surrey and the holding of an architectural competition have at length culminated in the creation and adoption of a design. We understand that the A.B.S. have appointed as architects the authors of the winning design, Messrs. Clifford Culpin and Partner, and are proposing to proceed at once with the building of the first part of the scheme, namely the larger, outer quadrangle. For this some money will have to be borrowed, a fact which should be sufficient indication to architects that efforts in support of the Centenary Fund should not be relaxed—rather the contrary.

The scheme, which we illustrate on the cover and in these pages, was accompanied by a remarkably thorough report which, together with the plans, indicates the great detail into which Messrs. Clifford Culpin and Partner entered in their study of the scheme.

They begin their report by a statement of principles governing their design. These include emphasis on the existing beauty of the site; provision of a pleasant prospect from and satisfactory orientation of the main rooms in every dwelling; the linked social room and warden's house to be visible from the road and the social room to enjoy the south-west sun to the maximum and to have a fine view of the trees. Also it was decided that the buildings must fit the site snugly yet 'as elegantly as a well-tailored garment fits the figure', that the first stage should form a compact entity and that there should be the minimum of disturbance to the old people already settled when the second stage building is done.

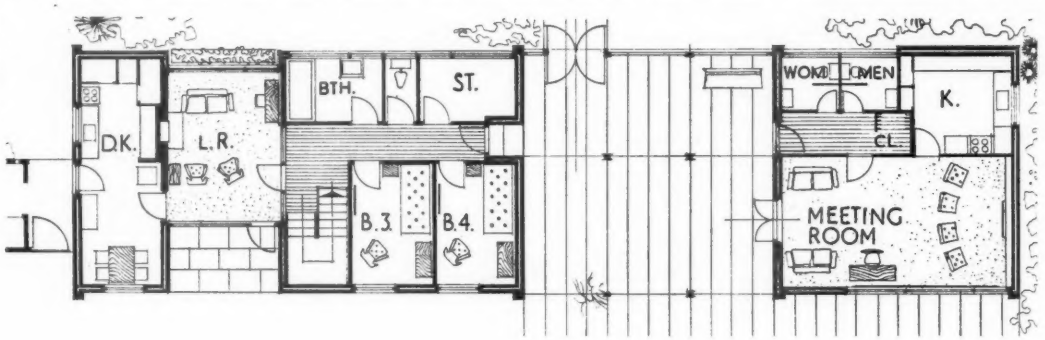
Regarding the form of the buildings, the architects say that, although slightly more expensive, the arrangement of the accommodation on one floor is more comfortable and convenient to old people and aesthetically more satisfactory. The warden's house, by being practically a detached unit, will dominate the other dwellings; by making it a 'storey-and-a-half' with rooms in the roof space this dominance is not too great.

Three visits were paid to the site in order to absorb its 'feeling' and to appreciate its natural attractions. It has two fine views, one from the meeting room and terrace towards the west and the other from the inner quadrangle. To the north 'a pink rash of new development was only too visible' and an existing hazel plantation has been preserved and will be extended to screen it. A few new trees will be planted, those in the central area being silver birches, and only one existing tree will be sacrificed.

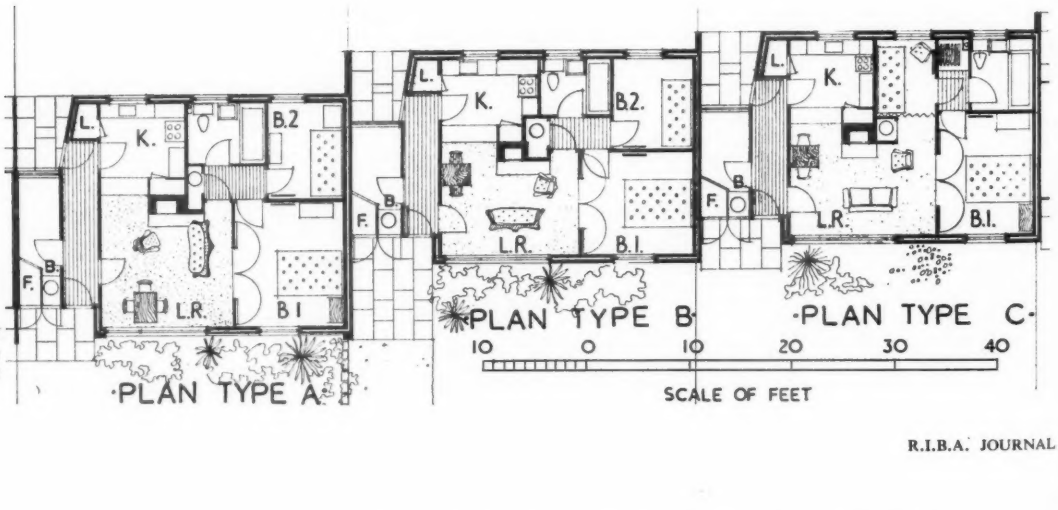
Certain of the dwellings for those who do not wish to undertake gardening will have the landscaping carried round them in the form of long grass with wild flowers. The areas of shorter grass will be sown with one of the newly developed slow-growing dwarf and self-reseeding mixtures. Extracts from the report are:

External Appearance. We have designed dwellings 'simple in character'—as stipulated—where the only 'breaks' are those deriving from change of floor level or of wall line in plan. The rhythmic repetition of extremely simple elements will produce a tranquil, harmonious result and the traditional materials selected will, in the words of the Conditions, 'not go shabby quickly but rather improve with age'.

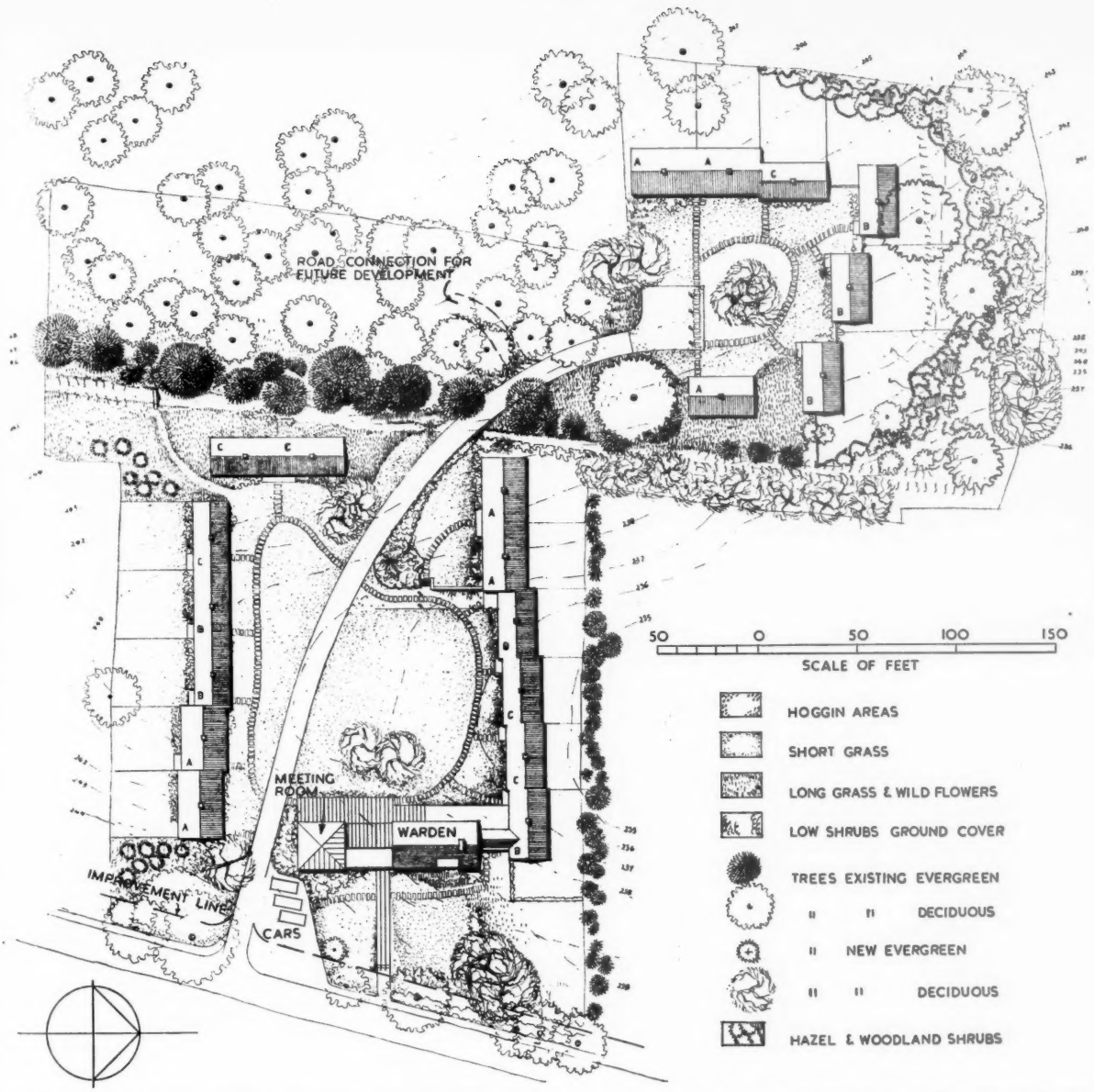
The cost factor has determined, without choice, the adoption of a 35 degree roof-pitch for all the dwellings (except the warden's house which is 42 degrees) and the roofs will be covered with dun-coloured pantiles. These tiles, unlike 'interlocking' tiles, look well at the close quarters of single-storey buildings. Bold, simple stacks will rise from the ridges. The walling will be mainly of Surrey multi-coloured bricks with flush mortar joints and dead white woodwork. Tile-hung portions will provide a rich yet harmonious contrast of colour and texture with club-headed deep red



The ground floor of the warden's house, the terrace and meeting room. The house has two bedrooms in the roof.



The three types of house. They are reversible to suit orientation.



coloured sand-faced tiles. Further richness will be given to the elevation by the recessing of entrance and sun porches.

Planning of the Dwellings. The key to the planning of the three types of dwelling is (i) the reversibility, to suit orientation, of each type. The main plan remains as drawn in relation to the sun but the store unit reverses for aspect; (ii) harmony between, and similarity of, the three types.

In each dwelling the space over the dresser unit can be opened to let sunshine through into the working kitchen, or closed for snugness.

In type 'B', the bedroom area of 180 sq. ft. is to be divided as two rooms with areas of 110 and 70 sq. ft. respectively.

Floor to ceiling heights are throughout 7 ft. 6 in.

In the warden's house, bedroom floor areas are in excess of those laid down, but this is balanced by the fact that part of the area has sloping ceilings.

In excess of programme requirements we have provided a garden-tool store to obviate some offensive small shed being erected at a later date.

Ground-floor stores of the old people's dwellings have been reduced to 35 sq. ft. and additional storage space is provided in the roofs.

Specification Notes

Doors. External doors will be: (1) on the sunny side, 2 in. nominal, purpose-made, glazed door in one panel. (2) on the shady side, $1\frac{7}{8}$ in. finish flush door faced with external quality plywood. Internal doors will be flush doors with cores of inert construction faced with hardboard for painting and lipped with hardwood.

Door Frames. Internal doors will be hung in $1\frac{1}{2}$ in. nominal thickness linings of n width to suit the partition or wall. External doors will be hung in 4 in. by $2\frac{1}{2}$ in. rebated frames with hardwood sills.

Door Furniture. Generally the door furniture will be Swedish with anodised aluminium lever handles and mortice latches. Small rectangular section bolts to match will be provided where necessary.

Front doors will have postal knockers (vertical where front doors are glazed) and cylinder night latches. Rear doors will have upright mortice locks, bronze lever handles and mortice bolts. Cupboards will have small, adjustable Bale's catches and anodised aluminium 'D' handles.

Ceilings. Ceilings will be constructed of plaster-board, the joints covered in jute hessian scrim, and finished with a skimming coat of 'board' plaster.

Sanitary Fittings. Each of the dwellings will have: (1) A 5 ft. 6 in. rectangular top 'Vogue' bath, specially designed for old people, with taps in a readily accessible position, the rim at low height above floor and grip rail incorporated. (2) A 22 in. by 16 in. earthenware lavatory basin on porcelain enamelled brackets and with Supataps. (3) A low level w.c. suite with syphonic pan. (4) A 'Leisure' porcelain enamelled pressed steel sink unit, with coloured finish, 63 in. by 21 in. and with mixing taps.

The allowance per dwelling is £71 9*s.* 4*d.* subject to 5 per cent cash discount.

Electric Lighting and Power Points. Wiring in floors and walls will be in conduit, above ceilings in T.R.S. Each dwelling will have its own meter and 'consumer's unit'. Each room will have one ceiling lighting point and all other lighting and power points (except cooker) will be served by a 13 amp. ring main with ample socket outlets and fused plugs. A cooker control unit will be provided in each kitchen.

Combined outlet plates, each containing one 13 amp. and two 5 amp. socket outlets, will be installed on the 13 amp. ring main as follows: Living room: 2. Kitchen: 1.

A small built-in electric fire will be included in the principal bedroom of each dwelling. Wiring to and installation of electric immersion heater is included in each dwelling.

Cooking Apparatus. While we should like to see electric cookers used throughout, elderly folk who have been used to gas are not likely to take kindly to change. Therefore a gas point is also provided to each cooker position. The actual cost of cookers is not included in our estimates, and should it not be possible to hire or hire-purchase these, additional cost will have to be met by the A.B.S. However, our figures, which are an honest estimate of costs, show a 'saving' of £165 compared with the stipulated maximum cost, which would be a useful contribution towards the provision of these cookers. Savings to meet the balance could undoubtedly be made.

Thermal Insulation. Walls will have a high degree of insulation through the use of Thermalite blocks. Windows will be closely fitting to avoid loss of heat and the large squares will be fixed and double glazed. Loss to roof space will be minimised by the provision of a 1 in. bitumen bonded fibre-glass quilt laid over the ceiling joists and covering in pipes. The cold water cistern and its connections will be accommodated in an extension, above the ceiling line, of the linen-cupboard enclosure. Where the ground floor is boarded, aluminium foil will be incorporated.

Walls. External walls will be of cavity construction. Below ground both leaves will be of fletton brickwork in cement mortar. The D.P.C. will be a proprietary brand of heavy hessian-based bituminous damp coursing. A similar D.P.C. will be used vertically at openings.

Where floor construction is solid the horizontal D.P.C. will be 2 in. wider than the inner skin of brickwork to lap on site concrete and form a seal at this critical point.

Above D.P.C. the external leaf will be in brickwork faced with $2\frac{5}{8}$ in. machine-made medium 'multi' kiln stocks from Ewhurst, at a price of 304*s.* per thousand delivered less 5 per cent cash discount. Mortar will be one part cement to eight parts sand with a proprietary mortar plasticiser added. (However, should this mix, with the local sand, give an unsatisfactory colour of joints we would employ a cement/lime/sand mix of 1:2:9. The former however has proved stronger, cheaper and more easily worked.)

Heads of windows normally extend to eaves construction, but where brickwork continues above, three courses will be built in cement and sand, 1:3, and reinforced with Exmet (joints of these courses would be raked out and pointed to match remaining work). The inner skin of external walls and also all load-bearing internal partitions will be 4 in. Thermalite blocks in similar mortar. Non load-bearing partitions will be in 2 in. Thermalite blocks.

Where walls are faced with tile-hanging, both leaves will be in Thermalite blocks, the outer one battened and hung with dark red club-headed sand-faced machine-made tiles costing 260*s.* per thousand less 5 per cent.

Roofs. Roofs will be of simple timber construction and covered with reinforced bituminous roofing felt, battens and dun-coloured sand-faced Norfolk pattern pantiles from Barton-on-Humber, p.c. 650*s.* per thousand less 5 per cent or, supplied and fixed with galvanised nails, 131*s.* per square, less $2\frac{1}{2}$ per cent.

The roof over the meeting room will be of timber construction to a pitch of 15 degrees covered with 'Stramit' or wood wool slabs, in turn covered with copper sheeting, similar to the Broderick system of roofing.

Windows. Windows will be of timber, purpose made, but limited to three types only and based broadly on E.J.M.A. sections, of softwood with hardwood sills. The large picture portion of the standard living room window will be fixed, to conserve heat, and will have double glazing. To avoid complexity and expense, opening portions are confined to simple horizontally pivot-hung lights. To ensure convenient outlook the bottom glass-line of living room and bedroom windows will generally be 2 ft. 3 in. and 2 ft. 9 in. above floor level respectively. However, in Type A, where living rooms are deeper, the glass extends almost to the floor. The hardwood sills will project sufficiently to render sub-sills unnecessary.

Floor Construction and Finishes. In our opinion funds will not run to wood-block flooring which we should have liked for the principal rooms. Further we need a space below floor for return pipes from radiators. We have therefore taken our central spine wall as a dividing line and ground floor construction is as follows:

Living room side. Site concrete and the Timber Development Association's hollow floor, and 1 in. nominal tongued and grooved deal flooring. To provide heat insulation and prevent draughts a layer of Alfol aluminium foil with paper backing will be draped over the joists.

Kitchen side (and utility link). Waterproofed concrete, floor slab finished with thermoplastic tiles in kitchen, lobby, occasional single bedroom and entrance hall and cork tiles in bathroom. Fair-finished concrete in store.

Heating and Hot Water. In every old person's dwelling the source of heat is located near the middle of the plan and will be a Brooks No. 3 all-night burning fire with very high efficiency back-boiler. The hot water system is indirect, and to avoid the provision of a second cold water cistern a patent hot water tank, such as the 'Wendy Autocyl', will be provided. In each of these dwellings there will be two radiators and a heated towel rail having the shortest possible circulation and the return pipe in the hollow floor construction. A small 1 kw. electric radiator will be built in under the window of each principal bedroom while the living room has a plug point into which a portable fire can be plugged for an unexpectedly cool summer evening.

Considerable thought has been given to the heating of the meeting and social room, bearing in mind its intermittent use, attendance, etc., and we have come to the conclusion that electric heating will give the best service. The focal point here will be an electric fire with background heat provided by 'black' tubular heaters, with thermostatic control, under the large west window.

Heating of the warden's house will be by open fire in the living room and Agamatic boiler in the kitchen heating about 100 sq. ft. of radiator surface and also providing hot water. As in the old people's dwellings, an electric immersion heater will also be provided.

Internal Finishings. To avoid a clash with the tenants' cherished possessions, internal treatment will be of the utmost simplicity. Walls, which are plastered, and ceilings will receive two coats of emulsion paint. Doors and other woodwork will be primed and painted two coats with a gloss finish. In kitchens white glazed tiling will extend over the sink and into the window opening to form inner sill. Over the bath there will be two rows of tiles extended to form a splash-back over the lavatory basin and into the sill.

Review of Construction and Materials

This section gives technical and general information. The following bodies deal with specialised branches of research and will willingly answer inquiries.

The Director, The Building Research Station, Garston, near Watford, Herts.
Telephone: Garston 2246.

The Officer-in-charge, The Building Research Station Scottish Laboratory, Thorntonhall, near Glasgow.
Telephone: Busby 1171.

The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks.
Telephone: Princes Risborough 101.

The Director, The British Standards Institution, 2 Park Street, London W.1.
Telephone: Mayfair 9000.

The Director, The Building Centre, 26 Store Street, Tottenham Court Road, London, W.C.1.
Telephone: Museum 5400 (10 lines).

The Director, The Scottish Building Centre, 425–7 Sauchiehall Street, Glasgow, C.2.
Telephone: Douglas 0372.

D.S.I.R. Report 1954–55. The Department of Scientific and Industrial Research has published its report for the year 1954–55 which saw the completion of the first financial year of the Department's five-year plan. Some 190 pages are needed for the summary of work, even though it gives no more than the briefest reference to the principal activities proceeding under the direction of the Department, and it is not surprising that the net expenditure for 1955–56 is expected to be about £6½ million; in 1954–55 the figure was £6¼ million. The report expresses disappointment that in spite of efforts to recruit, the increase in staff was only 159; which is less than the annual net rate of 200 provided for in the five-year plan.

In the summary of work carried out at the Building Research Station reference is made to the economies in the use of steel that may follow from the provision and allowance for rigid joints between beams and stanchions. Other subjects include the functional efficiency of buildings in the matter of heating, ventilation, lighting, noise and plumbing. Investigation is going on into the reason for the high cost of multi-storey flats, as compared with two-storey housing. A first report on this work was published in the April JOURNAL. Dimensional co-ordination, which is also mentioned, is being studied in conjunction with the British Standards Institution.

The report is published by H.M.S.O., price 7*s.* 6*d.*

The Production Exhibition 1956. This exhibition opened at Olympia on 23 May and will close on 31 May. The hours are 10 a.m. to 6.0 p.m. and the charge for admission is 1*s.* 6*d.* The sponsors are the Institution of Production Engineers. It is stated that although the standards of the exhibits are high the exhibition is in no sense a trade show; its purpose is to show some of the research and development which lie behind Britain's production achievements, and attention will be directed to improved human relations.

A conference is being held at which papers are being read on each of the seven days, and inquiries regarding the conference should be addressed to the Institution of Production Engineers, 10 Chesterfield Street, London, W.1.

The Design Centre for British Industries. In the October 1955 issue of the JOURNAL it was announced that premises at 28 Haymarket, London, were to be taken for housing the Design Centre of the Council of Industrial Design. The Centre is now installed there and H.R.H. The Duke of Edinburgh opened it on 26 April.

The available area of 8,000 sq. ft. on three levels has been used to advantage, the aim being to make the interior arrangements flexible to accommodate the display of articles accepted primarily for their good design but also for their efficiency.

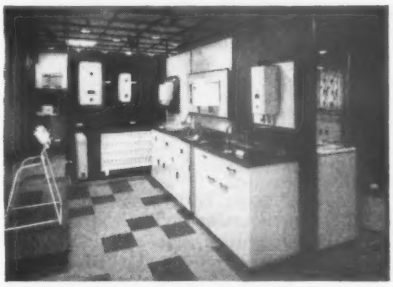
At the opening there were over 1,000 exhibits, chosen by a selection committee to be shown 'in the round' from the 7,000 or 8,000 examples in the Design Review Photographic Index. These exhibits will be changed at intervals of from one to three months, so that at any one time a representative selection in each category will be on view. Thus it is hoped that the Centre will function as 'a permanent, changing exhibition of well-designed furnishings and equipment for the interiors of domestic and commercial buildings', a purpose for which its position in the centre of London renders it convenient.

As articles of different shapes and sizes must be accommodated and lit, a grid system using a module of 2 ft. has been used in the interior; thus partitions either 2 ft. or 4 ft. can be erected to divide up the areas, and the suspended aluminium ceiling grid can be filled in either with interchangeable coloured Formica panels or with others containing display lighting fittings of various types. Small articles will be placed on aluminium ladder units fitted between floor and ceiling.

In many cases prices are shown on the exhibits, and further information supplied by the manufacturers can be obtained at the information desk.

The treatment of the street frontage was designed by Messrs. Ward and Austin and the interior and the exhibition fittings by Messrs. Nicholson Brothers. The telephone number of the Centre is TRAfalgar 8000.

Exterior of the Design Centre



A display bay at the Design Centre

Lefco Vitrified Tiles. The Leeds Fireclay Company Ltd. have recently produced a floor tile which has an acid resistance of 99·7 per cent when tested in accordance with the relevant British Standard. Other tests show that resistance to abrasion places the tile in Grade 1, that water absorption is less than one per cent, and the crushing strength is 11·3 tons per sq. in. The tiles can be had plain or chequered; their sizes are 6 in. by 6 in. and 6 in. by 3 in., the thickness being ¾ in. Coved angle, bullnose and similar tiles are available. Their acid resistance should make them useful for laboratories, chemical works, pickling shops and similar buildings, and their resistance to abrasion should save much replacement when used as flooring in positions of hard wear.

The address of the company is Leeds House, Cavendish Place, London, W.1.

Wallpaper Showrooms. In the November 1954 issue of this JOURNAL it was announced that the Wall Paper Manufacturers Ltd. had opened a showroom and advisory department at 125 High Holborn, London, W.C.1, where architects can inspect wallpaper designs and discuss their requirements with the attendant staff.

The company have now prepared the third edition of their BOOK OF ONE HUNDRED WALLPAPERS, which are all machine printed and cost from about 11*s.* 6*d.* to 18*s.* a roll. The new book contains a cross-section of new patterns and textures from the 1956–57 range of machine-printed Crown wallpapers. Although the samples in the book are mainly domestic in character, other patterns are available which may be considered more suitable for public buildings, offices and showrooms.

The 118th Annual General Meeting of the R.I.B.A. 1 May 1956

The President, Mr. C. H. Aslin, C.B.E., in the Chair

The President: I have to present the Report of the Council and Committees for the official year 1955–56 and to move that the Report be received. The Chairmen or other representatives of all the Committees whose reports are appended to the Council's Report have been asked to attend this meeting so as to be in a position to answer any questions that may arise in connection with these reports.

The Hon. Secretary, Mr. E. D. Jefferiss Mathews, O.B.E., seconded the motion.

Lieut.-Col. Lesslie Watson, M.B.E., T.D., [*F*]: My comments will relate to the Public Relations Committee, and I should like first to say, as a P.R.O. of an Allied Society, how very much we appreciate the close contact which this Committee has been maintaining with Allied Societies during the last year. There is however one important part of their work which I think members should be told more about. A brief mention is made of it in the Annual Report under the heading 'R.I.B.A. Small House Designs'. It may be news to many people who are here tonight that several well known and highly esteemed architects have designed standard houses for development companies. These houses are larger than those which it is proposed the R.I.B.A. should sponsor, but there is no special reason why other development companies should not put on the market house designs for sale to the general public. I mention that because it seems to me that if we do not hurry up we shall miss the boat with this very important matter.

We often get blamed as architects for things for which we cannot be really held directly responsible. We have got the blame for burst pipes during the winter, and how often have we been told by members of the public that we ought to do something about the better design of small houses?

The R.I.B.A. are doing something, but I think we should be told a bit more about it. The brief paragraph in the Annual Report could, I am sure, be amplified. I have been able to find more information from the BUILDING SOCIETIES GAZETTE for January of this year, which has a page and a half about the R.I.B.A. Scheme, called 'Bespoke Building for Everyman'. It seems to me that we ought not to have to go to a journal outside our own to be given information such as that, and I should like to suggest that as soon as possible in the R.I.B.A. JOURNAL we should be given the most up-to-date information possible about this very important matter.

Mr. E. D. Jefferiss Mathews [*F*], Chairman of the Public Relations Committee: Mr. Watson's point is, of course, a very good one. There has been some advance publicity in the BUILDING SOCIETIES GAZETTE which we could not, and in fact probably did not want to control, but there have been difficulties up to now and up to the time of going to press with the Annual Report in giving full publicity to the action that is being taken in connection with the R.I.B.A. house designs. There has been considerable difficulty since the Report went to print. There was a hold-up, unfortunately, in matters of finance—because this scheme requires quite a considerable sum of money to launch it. If the scheme is successful that money will not be required, since the scheme is designed to be self-supporting, but it is essential to have it as a backing to initiate the scheme. There have been difficulties, but the Council have now voted a considerable sum of money which, together with a lesser sum of money being put up by the Building Societies Association, means that the scheme is now ready to be launched, and only yesterday a meeting was being held in this building about it. I hope that in a matter of a month or so after the next meeting of Council a full report on the launching of the scheme can be published.

I should however like to take this opportunity of giving a word of warning. It will take quite a time before the scheme can become operative. We have to set up an organisation to direct it, and to appoint an officer to act in an executive capacity. That we consider to be essential so that the scheme is really a working concern when we offer it to the public. Then there is to be a competition for the submission of the designs to be selected for incorporation in the scheme and the publication of the booklet of those designs, which will be broadcast on all the bookstalls and in the bookshops for the public to buy.

So you will, I am afraid, have to wait a little longer. We do all of us fully appreciate the need for getting this scheme going, and no effort will be spared to push it on as quickly as possible, but it will be necessary to have a little patience.

Mr. Edward Jamilly [*A*]: Both the points that I wish to raise apply to the accounts. First, I notice that the allocation to the library—for the acquisition of new books, purchase of drawings and, I presume, replacements, bindings, etc.—is some £1,692. It seems to me that this, representing as it does about 1·5 per cent of the revenue of the Institute, is an inadequate figure. I say that because it is common knowledge that technical books are expensive. Books on architecture and the allied arts are perhaps more expensive than other books. It is by no means out of the way to pay £2 10s. or £3 per book nowadays. That means that individual members will to a greater extent rely upon the library than they will upon their own personal acquisitions. The question of duplicates is important to students. At certain times of the year I shudder to think how many Banister Fletchers are required! I imagine that there is a long waiting list for such books. Then there is the question of binding, and so forth. I notice that the issues vary between 15,000 and 17,000 per annum, so that it would appear that quite a lot of repair of books has to be done.

I do suggest that for a learned institution 1·5 per cent of the revenue is a low figure to spend upon a library which is the best specialist library of its type in this country. I am particularly conscious of gaps in the overseas publications.

The second point that I wish to raise is the question of the catering facilities at the Institute. I notice that the canteen again this year has got into the 'red'. I realise that this matter has been discussed in previous years and there are many problems connected with it; but it would appear to me that once a canteen is there with its equipment and staff, one way of getting it out of the red is to extend the use of it. There was a time when it was possible for members in the afternoon, for example, to have coffee and biscuits. So far as I know, that is no longer possible. I suggest that that might be reconsidered. There must be a number of members living in this area; perhaps greater publicity regarding the facilities available in the canteen might induce more of their staff to use it.

There is a very much bigger problem, which I will not touch upon now, of making more social use of the Institute building. There have been attempts in the past to do so. I do not know whether the portraits of Past Presidents would frown upon, for example, the holding of students' dances in the Institute. We have a very fine hall here; it is a very good setting for events which at the present moment take place elsewhere.

I realise that both these points that I have made—an increase in the allocation to the library and an increase in the catering facilities of the Institute—would require money from somewhere. I am not competent to say where that should come from. I can only put forward one thought which other members have been discussing with me. It is this. Are we not in danger of becoming an over-administered unit? The administration expenses are £49,000 out of £104,000, and next year I see that they are estimated to rise to £56,000. I think there is

a real danger there of over-administering the unit and cutting down thereby on the necessary facilities in the way of books and greater use socially of the Institute, and so forth.

Mr. Robert Townsend [*A*], Chairman of the Library Committee: With regard to the money that the library needs, we have had so far from the Council everything that we have required. We have never had to fail to buy a book or do a piece of binding because we have not had enough money to do it. There may be considerable gaps in the library; we are trying to fill some of them: but it is not in fact a financial matter, or has not been so far. The architecture of foreign countries was referred to and it was said that there are some gaps in the literature from overseas. The difficulty there is that we have to rely for our information on books that have appeared in foreign countries, on reviews published in this country and in the periodicals. Any book that appears to be interesting we get hold of if we can. You will understand of course that from many countries we cannot get books on approval, and that means that we have to be extremely careful about making a selection of books published abroad. I can quite clearly say however that so far we have bought all the books that we have required.

Some of you may find that there are shortages of certain loan works at certain times. We have to be careful about the acquisition of additional loan copies because, as you will readily appreciate, when a book is new hundreds of people wish to read it and after two years nobody may want to look at it. If we buy a dozen copies in such cases, we shall not be administering the Institute's funds satisfactorily. Some of you may have to wait for a new book, but I hope that you will be patient about that.

Another point is that we are trying to replace a number of our out-of-date loan copies, and we will continue to do that. It would be a very great help to the Committee if those members who feel that some particular section is weak and could be strengthened would let us have a list of the books that should be there and are not there. In fact we get very few requests from members for additional books and I think that pretty well all the requests that we do have are met, except possibly in the matter of loan copies of new works.

It may be that in the future we shall have to ask the Council for more money, and if so, I hope that they will be as generous as they have been in the past.

The Secretary: I was surprised to hear that Mr. Jamilly could not get tea in the afternoon. The canteen itself is not open for tea, but members can always get tea in the members' room if they will use the telephone and make their requirements known. Perhaps that may not be as well known as it should be, but we will publish periodically a notice in the JOURNAL reminding members of the facilities available to them.

With regard to the social use of the building, this is a matter which has been under review by the appropriate Committees since the end of the war. One of our major problems in dealing with that sort of thing has been recruiting staff, especially house staff. Unfortunately it will not be possible to use the building as extensively during the next few years owing to the rebuilding operations next door, but I am sure that is a point which will be borne in mind when No. 68 Portland Place is rebuilt.

I do not think the question of top-heavy administration is one that I could answer, Mr. President.

Mr. T. E. Scott, C.B.E., Hon. Treasurer: Perhaps I may deal with that question. The estimated cost of administration during the current year is of course appreciably higher than the cost in past years. That is accounted for by a number of factors. First, as I am sure members will appreciate, we have to compete as it were in the open market for the service of staff in various departments of the Institute, and it is necessary to increase the salaries which we offer in order to secure staff. I may say here that for the whole of the past year we have been below establishment, just because we cannot get all the competent people that are necessary.

The figure of £56,000 is one which includes some provision for additional staff to carry out the work which will be undertaken by what is called the Ad Hoc Committee—the Committee which was set up shortly after the last Annual General Meeting, and the interim Report of which appeared in the JOURNAL a month or so ago.

In the main, I would say that those who feel disposed to criticise the cost of administration might perhaps usefully ponder a little the enormous volume of work which has to be undertaken by the staff here in order to service the very many and very busy committees which are working in order to carry out the wishes of members. They get through a tremendous amount of work which only those who serve on committees and on the Council can really appreciate. All of that does cost money.

Mr. Spragg reminds me that when I mention the various departments of the Institute, that includes the library staff. Indeed, it includes the whole of the staff who are employed by the Council on your behalf throughout the Institute. I hope that is a sufficient answer.

Mr. F. T. Bush [*A*]: May I briefly endorse Mr. Spragg's remarks about tea? I frequently call for a cup of tea in the afternoon, and it is provided very promptly and is very pleasant.

In connection with the library, I would like to pay a tribute to the staff of the library—without detracting from anyone else. I get extreme efficiency and courtesy from them, and it is always a great pleasure to attend the library.

Mr. W. A. Eden [*F*]: I should like first to say how much I, too, appreciate the services provided by the staff of the library, which is the staff of the Institute that I come most in contact with; but I should like to express a great deal of concern that I have heard from people with whom I have been in contact about two matters.

First, there was the announcement that subscriptions were to be raised. At first view, that seemed to be a natural sort of thing in present circumstances. It is happening all the way round, and a good many people, I think, were disposed to pay up and not grumble. But when, a few weeks later, an announcement appeared in the daily Press advertising for a new and rather vaguely defined secretary, my experience is that a grumble was raised to a howl of rage. The sort of question that was asked was, 'What is this man going to do?' It was a little difficult to tell from the description in the advertisement, but one of the things that he is expected to inquire into is the functions of an architect. This Institute has been established for 118 years and it seems to be a little bit late for us to begin to ask what the functions of an architect are. But seriously, there is a great deal of questioning with regard to the necessity for setting up a new highly-paid post, which obviously will not stop at that. A person who is receiving that sort of salary is likely to want quite an appreciable staff, and he will want housing—and there I come to the point about the extension of the premises.

Is this really necessary, or is it simply to provide space for activities that are not supported by the whole body of the members of this Institute? It does seem to me, having been very carefully through the Report of the Ad Hoc Committee, that what is being said there is that the status of architects needs raising. In my experience, if people begin getting worried about their status, the only thing that happens is that their status becomes lower, and that is what we want to avoid at all costs in this Institute.

That leads me to the other matter that I wish to raise, and that is the activities of the Public Relations Committee. Here I should like to ask a question, and I hope to receive an assurance. It is that the Public Relations Committee does not, on behalf of this Institute, uphold the proposition that was put forward in a letter to THE TIMES recently by the Hon. Secretary of the Public Relations Committee that the public has no right to criticise its architects but should take them on trust. I am paraphrasing, but that, I think, was the gist of the letter. I should like to have an assurance that that is not the policy of this Institute.

Mr. F. G. Southgate [*A*], Vice-Chairman, the Ad Hoc Committee: Unfortunately the Chairman of the Ad Hoc Committee, Mr. Richard Sheppard, is away on a lecture tour. He has been a most active member of the Ad Hoc Committee, and could undoubtedly deal with this matter better than I could. I will try to cover the points which have been raised. There is the question of the employment of the new officer. Last year, when we started the work of the Ad Hoc Committee, it was quite obvious that it was up against a consider-

able number of unknown quantities. The terms of reference, it will be remembered, were quite wide, and it was fairly obvious at the very start that we should have to do quite a lot of research work. Various possibilities as to the way this work should be carried out were, naturally, examined in close detail both by the Ad Hoc Committee and by the Executive Committee, and it was eventually concluded that the most satisfactory way would be to set up a research branch of the Institute for finding out the information which the Ad Hoc Committee would require. The question whether this could be done by the existing staff naturally was also considered, but it was felt that this was a matter of such main importance to the profession as a whole that it would be better to make an entirely new appointment and at the same time that the appointment would have to be of an important character to secure the full confidence of the profession. The question of salary was of course considered in very considerable detail, and the relationship of the new officer to members of the existing staff was also very carefully considered. After taking all those items into consideration, the Council came to the conclusion that the salary which has now been offered would be an appropriate one for the class of man wanted.

Mr. W. A. Eden: Could we be enlightened as to the nature of the information wanted and the purpose for which it is wanted?

Mr. F. G. Southgate: I would refer you to the full Report of the Ad Hoc Committee, which is published in the JOURNAL of January last and in which, in the appendix, certain main headings were given of the general type of information which we require. That does give an outline of the sort of material that we want in the first instance; but it is quite obvious that as the scheme progresses, more and more additional information will be necessary from time to time. A thing of this sort is not something that gets done at once; it has to be a continuing process if the information is to be kept up to date and maintained as we want to maintain it, for reference both by the Committees and also by all members of the Institute.

Mr. J. Brandon-Jones [*A*]: Would it not have been possible to deal with this matter by making a temporary appointment and getting an expert to set up the machinery and perhaps to spend £5,000 on that, rather than to make an appointment in perpetuity, as I judge is being done from the fact that the salary is to rise by £100 a year. If the machinery had been set up, I should have thought that the staff could have kept it up to date.

Mr. F. G. Southgate: That was examined by the Committee, but they came to the conclusion that, although it might be possible to have the services of an outside body, one would have to be extremely careful about the employment of such a body; and also, with all due respect to outside firms of that description, they have not the intimate knowledge of the profession, and it was a little bit doubtful, too, we felt, whether members of the profession generally would have the confidence in supplying information to such an outside investigator as they would have in supplying it to an officer appointed by the Institute.

Mr. G. Grenfell Baines [*A*]: As a member of the Ad Hoc Committee, may I help Mr. Southgate, who seems to be so much under fire? I do not know whether the questioner was at the Annual General Meeting last year or not, but those who were became aware that there are stresses and strains within the profession that cannot do the profession very much good and cannot in the end do architecture very much good either. There was quite an amount of emotion at that meeting, and many of us went away thinking very hard indeed. Twenty-four hours later I came across a piece of information that I would have liked to have known at that meeting, and which would have helped a lot of people if they had known it. There are a tremendous lot of things that we do not know ourselves. We heard this afternoon that the building industry produced about £1,200 millions' worth of new work last year. We do not know how much of that work was done by architects. If we did know, we might know what the profession were earning as a whole. Some of the young people who are feeling stresses and strains might know whether there was any cake to share out at all before they start talking about something which might carve up the profession—never mind the cake.

That is the first information that we want to get. Then we want to know something else. We are told that the profession is divided into two forms of practice, official and private. Nobody worries about that. That is a development of society. We have got to live with it, to make our peace with it and to co-operate with it. But how is the profession divided in this respect? We do not know. If the profession is going to be pretty evenly divided, as some reports say, it is important that the conditions of employment of the people in the two fields of practice should be somewhat equal, otherwise there will be more stresses and strains. But who can cost official practice? Nobody can do so yet. We need to get to know about that. If any official department, unless it is doing a tremendous lot of repetition, is managing to do architecture at very much less than the scale of fees fixed by the Institute, I can only think there is a lowering of standards somewhere. We have got to find out these things. We have got to know what is the true value of security in pensions to people working in official positions.

We are not the only people who are trying to assess responsibility and the rewards of it. Those who take THE OBSERVER may have noticed that learned professors are trying to study this matter just now, and that is an article which the Ad Hoc Committee might well study.

These are a few of the things that we need to know. There are many things that we need to know before we know ourselves. We need a bit of emotion in architecture, but in our affairs as architects we need far more reason than emotion, and it is to get at this reason and 'know-how' that the Ad Hoc Committee—a body of amateurs who are spending a lot of time on the matter—needs a full-time, top-level official to give us the information and to say, 'Look, chaps, until you produce 50 per cent of the new buildings in this country, you cannot have £1,000 a year.' I am only shooting out figures, but when the new officer gets going perhaps the figures will be realistic, and some of those who ask questions will be reassured. We do not intend to waste money, but to use it to better the Institute and the profession generally, and finally to better architecture.

Mr. G. B. Oddie [*A*]: As one of the people at the last Annual General Meeting who contributed perhaps to some of the emotion to which Mr. Grenfell Baines has referred, I would very much like to add my word on the subject now under discussion and to offer my grateful congratulations to the Ad Hoc Committee for the Report that they have produced. I should like also to mention my thankfulness that the Council has had the wisdom to implement their recommendations.

Turning to the points that Mr. Eden and Mr. Brandon-Jones have raised, I am rather surprised that the wise-crack about a 118-year-old Institute should have come from an historian of Mr. Eden's stature. I should have thought it was quite apparent to anyone who had studied the history of the Institute that there was no such thing as a definitive architect, and it is precisely because the structure of the profession and the duties it has to perform in order to give full service to the people who employ it have changed to such an enormous degree since the war that an investigation of this kind has become absolutely imperative. We may be a profession in danger of losing our status because we are afraid of losing our status, but very shortly, if we do not do something about it, we shall be a profession fighting for a livelihood. It is absolutely no good whatever relying on willing horses to give what they can of their spare time in fighting with Government Departments and other people who have to be presented with the true facts of the situation, and I think that reinforces the answer that Mr. Grenfell Baines gave to Mr. Brandon-Jones as to why it is no good employing a part-time consultant. A part-time consultant can have his eye on the ball for the time that he is paid to have his eye on it, but after that he will lose sight of it. We have got to have somebody who is genned-up to the last minute with all the facts that he can command in order to rush in at the minute when any crisis arises that the profession is interested in. I think the Ad Hoc Committee have done an enormous amount of work which perhaps their Report does not clearly indicate, but I know that they have spent a fantastic amount of

time on this matter, and I think they deserve everybody's thanks for having done so.

I think it was a very good thing to publish the Report of the Salaried and Official Architects Committee, and I only regret that it was not done earlier, because I think that if it had been published earlier the rumpus last year need never have occurred.

Finally, I think that in these proposals lies the clue to retaining the unity of the profession. Although it might have appeared at times that there were two sides of our profession, in point of fact, united we stand and united we survive.

Mr. T. E. Scott: With regard to the question which was asked about the rebuilding next door, I should like to preface my reply by saying that the financial situation generally which caused the Council to decide to increase subscriptions is, I hope, fully and clearly explained in the Annual Report.

I should like to deal now with the extension which the Council have now authorised. In the first place, we are under an obligation to rebuild No. 68, and plans have been approved for the rebuilding and, as you will have read in the Annual Report, we have the necessary funds to cover the cost of that work. The rebuilt No. 68 will provide a little more accommodation than is now available in that building, and that increased accommodation will enable us to find one floor for the library to house the drawings collection and give the library staff just a little more elbow-room in the existing library. It will enable us to accommodate some of the senior members of the staff who at present occupy the south Committee room and are quite inadequately accommodated in other parts of the building. But even with No. 68 rebuilt, we should still be very much hampered. The library needs yet more accommodation so that the present library can be freed entirely for the use of members—and the Ad Hoc Committee, to which reference has already been made, will require a staff. The increased activities of the Public Relations Committee will naturally result in some increase in staff in that direction; and in many other minor instances those who are familiar with our work will know that we must have yet more accommodation than No. 68 will provide.

The alternative to providing that accommodation here on the site is to rent office accommodation elsewhere, and a less satisfactory and less economical arrangement than that it is difficult to imagine.

So the Council have decided that while we are engaged in rebuilding No. 68, which as I have said we are required to do by the terms of our lease, we will complete Mr. Grey Wornum's original design in a slightly modified form for No. 66 by adding two storeys. The plans for that extension are only just beyond the sketch stage, and quite obviously, now that that additional accommodation will become available, the staff of the Institute, under the guidance of the various Committees, may have to reconsider the allocation of space in the new No. 68 so that the staff are all comfortably and efficiently rehoused.

It is proposed on the top floor—the new sixth floor—to provide a somewhat larger canteen with a more efficient kitchen than we have at present—which is a rather makeshift arrangement—and in that way we hope that we can extend the canteen facilities, to which one member referred earlier. We shall provide two additional committee rooms, of which we are very badly in need at the moment, and the additional accommodation to which I have referred for the Ad Hoc Committee's and probably the Public Relations Committee's staff; and we shall probably rehouse the JOURNAL staff on one of the upper floors, making available to the library the accommodation now used by the JOURNAL staff.

I can assure members that, although these additions sound very considerable, they are not in fact wasteful, and that by the time these various additional activities which the Council have authorised are really under way, we shall certainly need all of the accommodation that will be available. I am quite sure that you will agree that the decision which the Council recently took was a very wise one.

Mr. E. D. Jefferiss Mathews: A question that was put concerning the Public Relations Committee was whether the Committee was averse from criticism as a matter of policy. The short answer is that we are not. We welcome well-informed criticism, which is good for all of us, and it can be just as good public relations whether it is adverse or not. Our object should be, of course, to endeavour to become more efficient architects and then we would not have adverse criticism levelled at us.

Mr. G. Grenfell Baines: If I may speak once more, following Mr. Scott's remarks, I wonder whether members can see the extensions at Portland Place as a reflection of the growing strength and responsibilities of the Institute. If you look at the figures on page 3 of the Annual Report, you will find that there are 75 per cent more Associates today than only a few years ago, and 25 per cent more Students. Our Institute is growing, its membership is growing, and with it of course our responsibilities. There is that side, which one might call the credit side, to the extensions, as well as the expense.

Mr. Howard V. Lobb, C.B.E. [*F*]: May I say a word in connection with the staff? As one who comes in here a lot to Committees of one kind and another, I would like to pay a tribute to the way that the staff work and to the interest which they show in the whole of the Institute's activities. I think we are very, very loyally served by them right from Mr. Spragg at the top down to those who help in the canteen or provide the members with tea. I would like, as a very ordinary member who comes in here, to pay this tribute to them.

The President: Are there any more comments or questions? If not, the Resolution having been moved and seconded, I will put it to the meeting.

The Resolution was carried unanimously.

The President: I should like now to move that a hearty vote of thanks be accorded to Mr. E. D. Lyons [*A*] and Mr. John Ratcliff, O.B.E. [*F*], for their services as Hon. Auditors for the past year. I was told before the meeting that they are not temporary, but they are acting unpaid. They are not temporary because we want them to go on again, as they have been going on for some time.

The vote of thanks was carried.

The President: Mr. E. D. Lyons and Mr. John Ratcliff are both eligible and willing to be re-nominated as Hon. Auditors for the current year, and if it is your pleasure, I beg to move that they be so re-nominated.

This was agreed to unanimously.

The President: That concludes the business of the meeting.

Correspondence

ARCHITECT, MANUFACTURER AND BS. 1311: 1955

The Editor, R.I.B.A. Journal

SIR,—I wholeheartedly agree with your article on the need for standardisation of the sizes of catalogues. As secretary of this firm I endeavour to maintain a reasonably workable system of catalogue files, under subjects, with a card-index for cross reference. Large, heavy catalogues are 'on shelf' and leaflets and pamphlets in a foolscap-sized filing cabinet.

Apart from the irritation of sizes, ranging from about 3 in. by 4 in. to well over foolscap, other irritations are:—

1. No date. Catalogues coming through the post get dated by me, but those given to the staff by representatives may wander around the office for months, even years, before appearing in my filing basket.

2. Dark and super-shiny covers which will not take my inked-on reference number. Some will not even take a gummed label without first being well scraped with a penknife.

3. Spirally-bound books. These, if small and filed in the cabinet, foul other papers and, if larger and filed on the shelf, cannot be indexed on the spine.

How I would welcome the standardisation of paint-colour cards and booklets of colours! These need a filing system of their own. When sizes range from 1¼ in. by 4 in. by 1½ in. deep to 7 in. by 10in. by 1¼ in. deep, and double and triple folded cards

of every size, it is impossible to keep any proper order in a limited space.

Yours faithfully,

E. K. PURDIE
Forsyth Lawson, Cunningham and Partners [*L/A*]

THE CLADDING OF BUILDINGS

Sir,—Alongside many other countries we are now adapting to our own climate and architectural traditions the new materials and techniques of light cladding. We can learn a lot from the experiences Mr. Mills reported to us in his paper, and the lessons he drew from them. In particular, recent information from America—much of which is now being confirmed independently here—should help us to avoid the teething troubles they have gone through.

Mr. Mills did well to remind us that these new techniques are not exempt from the usual laws of building but that certain problems such as condensation, which are for the most part concealed in traditional construction, become accentuated in the lighter forms.

May I add four comments from the background of what we have learnt so far at the B.R.S.?

Weathertightness is the first requirement and this means for wind as well as water. A survey in the U.S. produced the startling result that one-third of the occupants of such buildings experience noticeable air movement *right through* their curtain walls. Clearly this should and need not be if joints are properly detailed.

Second, in this dirty, sticky climate of ours there seems to be a place for light facing materials which, like brick, do not need constant attention to maintain a pleasing appearance—unless one's clients happen to be a Lever Bros. and produce detergents! Ordinary glass can be a cheap and useful facing material but may need cleaning on *both* sides, and window cleaning is an expensive form of maintenance. Users have found that ready accessibility for internal as well as external maintenance and replacement can be a boon.

Third, Mr. Mills mentioned the trend towards higher heating standards. Much is spent on good insulating materials to reduce expensive heat losses through outside walls. Some trials at B.R.S. indicate that this can be nullified if metal framing or bracing members form a continuous cold bridge through the wall. Although small in area these bridges, being metal, can conduct heat to the outside at many times the rate of the insulating material which is thus by-passed.

Lastly, another less serious but unexpected by-product of the light, dry building—particularly if heated intermittently—is that the occupants may share the experience of the headmaster of a prefabricated secondary school who did overtime at week-ends amid ghostly squeaks and creaks as his school cooled off around him.

However, there seems no doubt that these techniques when fully developed by the joint efforts of architect and manufacturer will form a valuable and permanent addition to the architect's vocabulary.

Yours, etc.

JOHN D. KAY [*A*]

THE MOTORWAY AND ITS ENVIRONMENT

Sir,—At the end of your report of Sir E. Owen Williams' paper on 'The Motorway and its Environment' you say that Mr. Kelly, Secretary of the Automobile Association, drew attention to the need of avoiding parallel lines in the layout of dual carriageways on the grounds that the road would look better and be safer. Mr. Kelly has already given distinguished service in bringing to public attention the importance of fitting the new motorways into the landscape. There is an excellent publication called *The Landscape Treatment of Roads* which owes much to his guidance. However, he does not appear to have received much consideration from Sir E. Owen Williams, who seemed to think the idea of allowing the separate carriageways to wander about, as he put it, to be irrational; and more expensive owing to the additional land which would be required.

It is significant that in answering another question from Professor Stamp, who wanted to reduce the amount of land to be used to a minimum, Sir E. Owen Williams, no doubt wishing to keep up the temperature of debate, thought the relative cost of land to be unimportant, i.e. £1,000 to £2,000 in a total cost of £250,000 a mile of motorway. The inconsistency of Sir E. Owen Williams' opinions should not be forgotten, nor should his estimated cost of land in relation to the cost of the whole project, because it is of much importance that the motorways should be faultlessly landscaped; and if it is necessary to separate the carriageways for this purpose, as it often will be, we ought not to allow cheeseparing to prevent it.

Yours faithfully,

GERALD HAYTHORNTHWAITE [*A*]

DICTIONARY OF ENGLISH ARCHITECTS

Sir,—I was most interested to read a letter headed 'Dictionary of English Architects' written by Mr. Christopher Gotch [*A*] in your issue of November 1955 (p. 34).

The following may be of some interest regarding Nicholson, who in the letter is named as 'George'. In our office library there is a well-bound tome, entitled *The New Practical Builder and Workman's Companion*. The frontispiece then describes the contents as 'a full display and elucidation of the most recent and skilful methods pursued by Architects and Artificers, including also a Treatise on Geometry, etc. etc., a Summary of the Art of Building and the theory and practice of the Five Orders as employed in decorative Architecture'. It is by 'Peter Nicholson, Architect' and printed in 1823. There are a number of copper plate engravings containing designs by 'M. A. Nicholson'.

Is either of these Nicholsons a relation of the 'George' Nicholson?

Yours faithfully,

J. K. COLLINS, A.N.Z.I.A. [*A*]
Christchurch, C.1., N.Z.

EDITOR'S NOTE. The R.I.B.A. Librarian says there is a copy of the book referred to by Mr. Collins in the R.I.B.A. Library. The engravings in it are by Michael Angelo Nicholson. There appear to have been three Nicholsons, who chronologically were George, Peter and Michael Angelo, but he does not know whether they were related.

ARCHITECTS' BENEVOLENT SOCIETY CENTENARY APPEAL

Sir,—In 1950 when the Architects' Benevolent Society was 100 years old, an appeal for £50,000 to build and endow our own cottages was launched. Since then, through the generosity of many donors and, in particular, due to the magnificent work done by the A.B.S. Ball Committee under the chairmanship of Mr. Cecil Epril, £23,500 has been collected.

After many delays and difficulties, a site has been acquired and the result of the competition for the first of the houses has just been announced.

Messrs. Clifford Culpin and Partner, who have won the competition with a most interesting design, have been instructed to proceed immediately with the first part of it.

My Committee is anxious to see that the money may soon be provided to complete the scheme and I hope therefore that I may appeal to every one of the 19,000 architects on the register and to all who care for the profession to give again to this appeal. Donations of all sizes will be gratefully acknowledged by Miss B. N. Solly, the Secretary of the Society, from this address. She will also be only too pleased to send on request particulars of the Covenant scheme—by which those who will promise to give for seven years can provide the Society with an extra 14*s.* 9*d.* in reclaimed income tax for each £1 given.

Yours faithfully,

ROBERT O. FOSTER [*F*]
Chairman, A.B.S. Centenary Appeal Committee

The International Union of Architects

Schools Construction Commission: Fourth Meeting

THE I.U.A. CONGRESS OF 1953 in Lisbon approved a preliminary report on school construction prepared by the Commission at the request of U.N.E.S.C.O. and asked that the work be extended by wider and more detailed investigation particularly in relation to what are termed the 'under-developed countries' of Latin America, the East and the Middle East.

This report was based on a questionnaire circulated among a number of countries. In January 1954 the third meeting of the Schools Commission of the I.U.A. considered the findings in detail and agreed further steps in the development of the work assigned to it. The report was subsequently published in 1955 with the financial aid of U.N.E.S.C.O.

The further decisions of the third meeting were (*a*) to complete the survey of existing conditions by including data from a wider range of countries; (*b*) to prepare, if possible, some form of analysis or chart of basic principles common to the school building practice of countries covered by the questionnaire (if such basic principles exist); (*c*) to prepare a study of rationalisation in all its forms—standardisation, prefabrication, etc.—in school design, and (*d*) to consider further the possibility of the setting up of technical assistance missions by the United Nations for school construction in under-developed countries on the same footing as those on housing, town planning or hospitals.

The venue of the fourth meeting of the Schools Committee in 1956 being London, the British section of I.U.A. were responsible for making the arrangements and preparing an agenda.

It was early decided by the British delegates, Kenneth J. Campbell [*A*] and S. A. W. Johnson-Marshall [*A*], together with Robert H. Matthew [*A*] and Godfrey Samuel [*F*], Chairman and Honorary Secretary of the British section, that the main subject should be the problem of giving assistance to under-developed countries in school building. At a meeting in January attended by M. Vouga and by British representatives of U.N.E.S.C.O. a concrete proposal for a pilot scheme of investigation into problems of school building in India, subject to the approval and co-operation of the Indian Government, was agreed and a draft agenda was sent out to all the Commission delegates.

The Conference was scheduled to begin on Tuesday 20 March and to last until midday Friday 23. It opened in the Council Chamber of the R.I.B.A., with M. Alfred Roth (Switzerland), the President of the Commission, in the chair. Delegates present were: Jean-Pierre Vouga (Switzerland), J. P. Kloos (Holland), Professor Carbonara (Italy), Oton Gaspari (Yugoslavia), Professor Paul Hedqvist (Sweden), J. Marozeau and A. Farès (Morocco), Professor Gunter Wilhelm (Germany), Kenneth J. Campbell, S. A. W. Johnson-Marshall, B. Schranil and J. Stasek (Czechoslovakia), R. Dhuit (France), Jacques Marmey (Tunisia), Albert Piron (Belgium). Ernest Kump, the American delegate, arrived Wednesday morning and the Polish members, Jan. Sztaudynger and Andryej Uniejewski, were further delayed, arriving on Thursday.

Following a short speech of welcome by the Chairman of the British section, Professor Matthew, the conference rapidly dealt with the preliminary items on the agenda. It was agreed that M. Vouga should be responsible for completing the original enquiry by obtaining answers to the questionnaire from Czechoslovakia, Italy, Soviet Union, Morocco, Turkey, Brazil and China. M. Marozeau (Morocco) was asked to prepare a 'Charte de l'Ecole' setting out the basic principles of school planning and construction which might emerge from the completed questionnaires. M. Dhuit (France) agreed to produce a survey of methods of rationalisation, architectural, financial and administrative, current in the countries investigated.

In the afternoon the Conference tackled the main item, the question of assistance to under-developed countries. The Conference was definite that such assistance could not take the form of an attempt, however well intentioned, to export the solutions to school problems found satisfactory in the West. The experienced analytical methods of western architects, administrators and educationalists should be brought to bear on the particular problems, traditions, aims and resources of a country (in co-operation with its own authorities). No satisfactory programme could possibly be prepared, much less achieved, unless these factors were accurately assessed—an extremely difficult task. The shape and scope of an 'Instrument of Investigation' proved so difficult to determine that the Conference decided to split into four sub-commissions.

It cannot be said that the results of the labours of the four sub-commissions, which occupied the late afternoon of Tuesday and the early morning of Wednesday, were fully satisfactory. (In passing it may be noted that our continental guests were highly if politely amused at the British delegates' ideas of 'early morning'.) When the full Conference met again, this time in the Aston Webb Room, it became clear that there was much overlapping and that much more time and detailed consideration were necessary to prepare an efficient and viable 'Instrument' which could be regarded as likely to achieve the aims of the investigation. It was felt moreover that such were the historical, political, social and geographical differences of the less developed countries that a single pilot scheme (in India) would be inadequate.

The following decisions were made:—

(1) That, subject to the agreements and co-operation of their respective governments, pilot studies should be undertaken simultaneously in India and Morocco.

(2) That MM. Roth and Vouga should draft the Instrument of Inquiry on the basis of the work of the Conference and submit it in draft to the British and Moroccan delegates for final approval.

(3) That this 'Instrument' having been completed, the execution of the pilot study in India should be the responsibility of the British section and in Morocco of MM. Marozeau and Farès.

During these discussions the Conference was joined by Mr. J. S. Arthur, the U.N.E.S.C.O. representative in Britain, who set out for the information of the meeting the general terms on which assistance and co-operation would be available to the Commission, and by Mr. W. D. Pile, Assistant Secretary, Ministry of Education. Mr. Pile gave a concise outline of the background of co-operation between educationalist, administrator and architect which lay behind the British achievement in school building and of the methods by which the central authority controlled the national programme. This so impressed the delegates that verbatim copies of the speech were demanded by each of them.

The business of the Conference being thus far advanced it was decided to endeavour to complete the formal agenda that day.

(*a*) An invitation had been received from the C.I.B. to collaborate in a project of research into secondary schools. It was felt that this would be too much in addition to the other work before the Commission but that the experience already gained by the I.U.A. might be made available.

(*b*) Some steps had already been taken by other working Commissions of the I.U.A. towards preparing a glossary of technical terms in the various official languages of the Union. Herr Wilhelm was asked by the Commission to accept the task of selecting a list of terms current in the fields of education and school building for inclusion in this Glossary.

(*c*) Finally, by the unanimous vote of the Commission, M. Roth was re-elected President of the Schools Commission. It should be recorded that the success of the Conference was doubly due to M. Roth's exertions: first in the extremely efficient way in which he controlled and pressed on the business as chairman, second by his most able activities as interpreter. Faced as he was with a meeting whose linguistic range varied from a Yugoslav with some know-

ledge of German to Englishmen with a typically English command of French, M. Roth's virtuosity in rapid translation into any one of three languages was an awesome spectacle to at least one British delegate whose efforts to recall his French vocabulary only resulted, by the end of the Conference, in his complete inability to remember even the English words for the simplest objects.

This concluded the formal business of the fourth meeting and the real hard work of the week then began. On Thursday morning the delegates travelled by coach in a steady downpour to see some of the work of the L.C.C. Architect's Department, comprising two primary schools, point blocks, a comprehensive high school and a secondary school in construction. On Friday morning they were taken out to Hemel Hempstead to be shown over two Hertfordshire County Council secondary schools by Mr. Tatton Brown, whose fluent French was the envy of the British delegate and the admiration of the others. In the afternoon they visited further L.C.C. housing in South London and were then free to visit the National Gallery and Pimlico housing, both of which figured in the private list of every delegate.

The success of the Conference owed a very great deal both to the hard work of the staff of the R.I.B.A. and to the social events which provided the opportunities for that informal conversation which is so important a part of any such gathering. They included lunch, dinner and cocktail parties at the R.I.B.A. at which the delegates met Mr. and Mrs. Aslin and other officers, a cocktail party at the Architectural Press and lunch at County Hall at which Mr. Edmonds, the Chairman of the Town Planning Committee, and Dr. Leslie Martin [*F*], Architect to the L.C.C., were the hosts. These gatherings were also graced by the presence of Mme. Dhuit, Signora Carbonara and Fr. Kloos.

National Service

I. INTRODUCTION. Origin, Objects, Use of Special Knowledge, Application to Architectural Training. The Council of the Royal Institute wish to give students as much information and guidance as possible in regard to National Service. Since the scheme for deferment of National Service was introduced there have been a number of meetings between representatives of the Board of Architectural Education and the Ministry of Labour and National Service. At these meetings every opportunity was taken to secure the best possible conditions of deferment for architectural students to assist in their preparations for the examinations. There have also been meetings at which discussions have been held on the best use that an architectural student can make of the time he spends in one of the Services, having regard to the overall requirements of the nation which are referred to below.

Compulsory National Service was introduced in 1939 at a time of grave emergency. The primary intention of the Acts was to create a force of trained fighting men and the necessary services to support them. The individual was thus compelled to serve the community in such a capacity as the community considered best for its own needs. Withal there was a liberal interpretation and concessions were given not only to meet individual needs but to produce men more valuable to the State when ultimately called up. These Acts being still in force, these notes should be read against the background that the primary aims of National Service have not substantially changed.

Any modern fighting force requires a host of skilled men to maintain it in efficiency, but the great majority of those required are tradesmen and artisans. The fighting service is in itself a profession and other professional skills are used in an ancillary capacity, e.g. Royal Army Medical Corps, Army Legal Service, etc. The particular technical skill of an architect has no direct application in the armed services in peace-time since almost all building work is carried out by civilian contract.

II. DEFERMENT. Object, Eligibility for, Procedure for application. Deferment is a concession made to the individual for a variety of reasons of which the completion of a course of study is only one. The State will benefit ultimately by securing trained and educated citizens, but will benefit immediately in regard to its fighting services only in so far as the training for which deferment is given is of immediate practical use in those fighting services.

So far as architecture is concerned, deferment may be granted to students to enable them to complete a full-time course at a school of architecture or, under certain conditions, to take the R.I.B.A. Intermediate and Final Examinations by part-time or evening study while working as architectural assistants, provided in either case that the student does not pass out of liability for National Service by reason of his age. Liability ceases at the age of 26. Any student who cannot complete his training by that age may be granted deferment to enable him to undertake part of his architectural training before being called up, but such deferment must be terminated in sufficient time to allow the student to be called up before reaching the age of 26.

It is often asked whether any guidance can be given as to when is the best time to do National Service. Individual cases vary so much that it is considered impossible to give any specific advice as to the stage in the student's training at which it is most desirable for him to do it.

Students attending full-time courses at schools of architecture should make application, in duplicate, for deferment on Form Misc. 20 to the appropriate University Joint Recruiting Board. Students who are assistants or pupils in architects' offices should make application on Form N.S. 294, obtainable from any local office of the Ministry of Labour and National Service.

III. PROCEDURE FOR CALLING-UP. Registration, Medical Examination, Interview, Expression of Preferences. In dealing with the procedure for registration and call-up in these notes the case of a student who has already secured a period of deferment is alone considered.

Shortly before the end of the period of deferment a student is sent a questionnaire form, N.S. 58, together with 'Notes for the Guidance of Students'. The Form N.S. 58 provides for the supply of information about the individual, including his education, technical qualifications, practical experience, previous employment, languages spoken, hobbies and recreational interests, intentions as to civil employment after National Service, whether he wants a commission, choice of service, preference for particular arm or corps and particulars of previous military training. The particulars given are then considered by the Ministry of Labour and National Service in conjunction with the manpower branches of the fighting services and a first sorting according to the needs of the three services is undertaken. The student is subsequently called up for medical examination and, at the same time, interview by a representative of the service to which he has been provisionally allotted. At this stage the student is able to elaborate on the particulars which he gave in the form and to draw attention to any special considerations such as family connections with an arm of the service, etc. In expressing his preference he is given three choices so that if the requirements of the service do not permit his posting to his first choice, every effort may be made to meet his desires as nearly as possible.

IV. CHOICE OF SERVICE, ARM OR CORPS. Navy, R.A.F., Army, Architectural Qualifications in relation to Branches of the Army, Importance of Territorial Connection. In the course of discussions with the Ministry of Labour and National Service it has been stated that there is virtually no employment in the Royal Navy and almost equally none in the Royal Air Force in which the particular knowledge and qualifications of an architect can be utilised, and furthermore that these two Services in peace-time do not require any substantial intake of National Servicemen: what they do take are mostly clerks and trained artificers. By far the greatest demand is in the Army, but here again, as previously indicated, the opportunities for the direct employment of architectural qualifications are so very limited as to be not worth considering.

The object of National Service being to create a reserve of trained fighting men, the majority of each intake will have to be trained as fighting soldiers rather than specialist tradesmen, and even yet the infantry and mechanised cavalry form the greater proportion of fighting soldiers. The

corps in which the architect's qualifications appear to be most likely to be used is the Royal Engineers. The Royal Engineers in peace-time however take only limited responsibility for building work. What there is of it is supervised by 'regulars'. Some aspects of architectural training, e.g. mathematics, survey procedure, use of maps and plans and the principles of construction, etc., are useful in the Royal Engineers, and knowledge of mathematics, electricity and survey in the Royal Artillery and Royal Signals. Where however a student has long-standing family connections with a particular part of the country he would be well advised to opt for his county regiment of the Royal Armoured Corps or infantry, since it is probable that while National Service lasts he will be required to continue with some form of part-time training at the end of his two years. This will be carried out more happily with a unit with which he has local territorial connection, and to this there is associated a social connection which in later years may be of value to him as an architect.

V. TRAINING. Assessment of Individual, Officer Material, Time to Reach Proficiency, Overseas Trooping. The university graduate or student is regarded as of likely officer material but he is given the same general series of tests of ability and intelligence as everyone else. He should stand an excellent chance of being officially assessed as O.R.I. or a potential officer, but this will depend to some extent on the preferences he expresses. Broadly speaking, the Army is short of officers in the fighting arms and less so in the specialist arms in which, in any case, it is of little value to commission a man who will give only some six or eight months' officer service as a specialist after having been commissioned.

It should be remembered that the Army is a profession as much as medicine, architecture, etc., and it is not reasonable to expect a man to become of any very great value in as short a period as two years, especially in a commissioned rank. Most of the period must be occupied in teaching the potential officer the profession of arms, and even officers in the specialist arms of the service are expected to have a thorough basic training in the elements of soldiering.

In every case, the National Service conscript must do his six weeks' primary training before proceeding to an officer training unit or specialist training as an other rank.

With the wide overseas commitments of the British Army, the opportunities for service abroad are considerable, though somewhat less so for National Service officers and other ranks in specialist arms, since by the time these have completed their basic training there tends to be insufficient of their two years left to make the expense of trooping worth while. This applies far less in the fighting arms since much of the training is carried out by the unit rather than at base installations.

VI. CONCLUSIONS. Leadership, Another Profession, Recreation. The newly qualified architect or student is strongly advised to regard his period of military service as something in the nature of a digression or a venture into an entirely new sphere of experience. He has in fact been conscribed into an entirely different profession, that of arms, at the nation's demand and for the nation's service. He should defer to the nation's will and accept the situation that he cannot continue directly to study and practise architecture during this period. This does not mean that he cannot profit by his new experience. The most important function of the architect is as the leader of the building team, and as a young officer in the fighting services the young architect is in an advantageous position to learn the arts of leadership. By his education and training, the young architect has developed his powers of intellect and reason: these are precisely what are required for junior leaders in the fighting arms of the services. By making every effort to obtain commissioned rank, he will be serving the nation best. He may get further benefits for himself by serving overseas and thereby widening his experience. Through all this period, the study of architecture may be continued as a recreation and a preparation for his return to civilian life. By then the powers conferred by years of study in schools will have been reinforced by his period of experience in the wider world of men. One of the requirements of an architect is a knowledge of and interest in 'people', since whatever he builds he builds for people. There are many ways of gaining experience of people. National Service is only one way but, approached properly, need not be unrewarding.

Practice Notes

Edited by Charles Woodward [*A*]

IN PARLIAMENT. Plumbing in Airey Houses. The Minister of Housing and Local Government was asked whether he was satisfied that the plumbing in Airey prefabricated concrete houses, which were recommended by his Department to local authorities, conformed in all respects with the provisions of model water bye-laws and the housing manuals and their technical appendices, and whether he was aware of their vulnerability to frost damage. Mr. Sandys stated that the drawings, specifications and bills of quantities for the Airey house provided for precautions against frost but whether these were fully adequate was one of the matters he was investigating. (19 March 1956.)

MINISTRY OF HOUSING AND LOCAL GOVERNMENT. Regional Organisation. The Ministry of Housing and Local Government have circularised local authorities in England announcing that the Minister proposes to effect a substantial reduction in the size of the staffs of the Ministry's regional organisation. The Circular (No. 19/56) states that the need for day to day professional advice on housing and planning matters in the regions is now much reduced, and as from 1 April the work hitherto done in the regional offices in connection with these two aspects of the Ministry's work will be transferred to headquarters, together with most of the remaining regional staffs. The Minister feels that it is still important in the interests of both the Department and the authorities to keep some regional organisation in the parts of the country farthest from London. With the exception of the Cambridge and Reading regions, he proposes to retain in each regional centre a principal regional officer who will continue to be the Department's senior representative resident in the region. He will be available, the Circular explains, to act as the link between the Minister and the local authorities, keeping the Minister informed on local opinion and important local developments, and discussing the implications of policy with the authorities.

MINISTRY OF EDUCATION. Educational Building. Limits of Cost for New Schools. Last February wages in the building industry were increased by 1*d.* per hour. On 16 April they were increased by a further 2½*d.* per hour. The effect of these two wage awards will be to increase the cost of educational building by over three per cent, according to the Ministry's index of building costs.

The two wage awards will result in a substantial increase in the costs of all building and, in accordance with Circular 274, an increase in the present limits of cost of £154 and £264 per place would now be due. The Minister has decided however that in the present inflationary situation he must reject such an increase. He is confident that if architects and builders bring to their task the same imagination, skill and energy as in the past they will again be able to absorb the increases in costs. He realises that authorities may have to adjust to a certain degree their standards of space, design, construction or finish, but after examining carefully the general effect on the quality of new schools he finds no evidence to show that the basic standards of design and construction need be reduced below tolerable levels. He does not therefore propose at this stage to amend the present Building Regulations.

This Circular applies to any type of school building for which announced limits of cost (i.e. those announced in paragraphs 1–3 of the Appendix to Addendum No. 1 to Circular 274) are in operation. The Minister is examining the current limits of cost for further education projects and will announce a separate decision shortly.

NATIONAL JOINT COUNCIL FOR THE BUILDING INDUSTRY. New Rates per Hour (As from Monday 16 April 1956). The new rates per hour for craftsmen and labourers are as set out in Table I.

Table I. New Rates Per Hour

	London		Grade			Liverpool District
	Inner	Outer	A	A1	A2	
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Craftsmen	4 5	4 4½	4 3	4 2½	4 2½	4 5
Labourers	3 10½	3 10	3 9	3 8½	3 8	3 10½

For *Watchmen* they are:

London and Liverpool 23*s.* 9*d.* per shift
Provinces .. .. 22*s.* 6d. per shift

Under the R.I.B.A. Form of Contract the increases as from 16 April will be a net addition to the contract sum in current contracts.

Extra payments of 1*d.* per hour in respect of work involving discomfort, inconvenience, continuous extra skill or responsibility are payable as from 16 April.

These payments are made under National Working Rules 3A and 3B.

KENT COUNTY COUNCIL. Re-erection of Old 'Prefabs'. As discarded prefabricated houses are now coming on to the market in large numbers at auction sales, the Kent County Council draws attention to difficulties which might arise if buyers re-erect them without obtaining the requisite consents.

A statement by the Chairman of the County Council's Planning Committee, Sir William Wigham Richardson, Bart., M.B.E., J.P., points out:—

'These prefabricated houses were designed originally to have a very limited life and the Ministry of Works are now arranging for the sale of those which have been discarded by local authorities after replacement by permanent houses. It is understood that between 2,000 and 3,000 prefabs a year are being offered for sale. Advertisements of these sales and tendering schedules contain a warning to purchasers that they are responsible for securing planning and bye-law consents for their re-erection. The warning also advises people to ascertain their position regarding these matters before offering to buy.

'Generally speaking the re-erection and re-use of these buildings in Kent would not be acceptable to the local planning authority. The Minister of Housing and Local Government has dismissed two recent appeals against refusals, on grounds of amenity, to permit the erection of such structures in East Kent. My Committee wishes to save prospective buyers disappointment and possibly hardship by making the position clear. Anyone thinking of buying an old prefab. for re-erection would be wise to make enquiries beforehand about the planning and bye-law position. Enquiries could be made at local council offices or direct to the County Planning Officer either at County Hall, Maidstone, or at one of the Divisional Offices.' (16 April 1956.)

LAW CASES. Kirk and Kirk Ltd. v. Croydon Corporation. Building Contract. Delay by Nominated Suppliers. This case concerned a special case stated by an arbitrator for the opinion of the Court.

The contract was the R.I.B.A. contract and the contractors claimed for payment for delay caused by late delivery of facing bricks by nominated suppliers.

The architect under the contract had ascertained that the brick suppliers had 100,000 bricks in stock and that delivery of the balance required could be made five months after the contract date. The bills of quantities provided for 250,000 facing bricks.

On the signing of the contract the architect wrote to the contractors nominating the suppliers of the facing bricks and instructing them to place the order for the bricks. He also sent them a copy of the nominated suppliers' letter as to delivery.

Delivery of the bricks was not made as promised and the contractors alleged that in consequence four weeks' delay occurred in the completion of the contract. They claimed that the architect instructed them to use certain bricks and that his intervention, under Condition 1 of the R.I.B.A. contract, was an instruction or variation which entitled them to payment for the delay.

The arbitrator, subject to the opinion of the Court, awarded the contractors £1,402 9*s.* 1*d.* and the Corporation appealed. The arbitrator found that the architect intervened in the matter of the facing bricks to an extent that was unusual and that the action he took amounted to making arrangements for the delivery of the facing bricks.

For the Corporation it was submitted that nothing was done by the architect to hinder the contractors in the reasonable execution of the work, and the architect did not make himself responsible for the supply of the facing bricks. The architect only repeated to the contractors what the brick suppliers had said to him. He allowed the contractors to build the inner skin of the cavity walls in advance of the outer skin to minimise the delay.

For the contractors it was submitted that the arrangement made by the architect for the supply of facing bricks and imposed upon the contractors amounted to a modification and was a direction affecting the way in which the contractors could carry out their planned programme. The contractors were entitled to compensation for delay.

Giving judgment, his Lordship said the delay was occasioned by the breach of contract by the nominated suppliers, and the decisions in previous cases showed clearly that the Corporation could not be responsible for breach of a contract to which they were not parties. The contractors were not entitled to be compensated because the brick suppliers had failed to carry out the terms made with the contractors. The next question was whether the architect, in giving permission for the inner skin of the cavity walls to be built first, ordered a 'postponement' entitling the contractors to compensation. His Lordship said as far as he could see the contractors—far from suffering a loss—had a benefit in that matter. He held that the contractors were not entitled to recover compensation for delay and gave judgment for the Corporation with costs. (THE ESTATES GAZETTE 7 April 1956.)

Davis Contractors Ltd. v. Fareham U.D.C. Claim for delay due to shortage of labour and materials. In this case the contract was for the building of 78 houses within eight months for the U.D.C. The contractors' tender was, by a letter attached to the tender, subject to adequate supplies of material and labour being available as and when required to carry out the work within the time specified. Owing to bad weather and shortage of available labour the work took twenty-two months to complete.

The contractors made a claim for delay which was referred to arbitration. The arbitrator found that as adequate supplies of labour and material were not available the contract was so changed that it became void and he awarded the contractors an additional £17,258 on a *quantum meruit*.

The U.D.C. appealed and the Court of Appeal, in allowing the appeal, held that even if the letter attached to the contractors' tender was incorporated into the contract, it meant that they would be excused for delay owing to inadequate supplies of labour and material. The delay therefore affected the time but not the price, and the fact that, without the fault of either party, the contract became more onerous, so that the time for completion was extended, was no ground for relieving the contractors from the obligation they had undertaken and allowing them to recover on a *quantum meruit*. There was no question of some unexpected emergence of a fundamentally new situation, for the indications were that the parties had contemplated that the contract would be binding even though their anticipations as to the availability of labour and materials might be disappointed.

In allowing the U.D.C.'s appeal the Court gave the contractors leave to appeal to the House of Lords. (1955. *All England Law Reports*, Vol. 1, page 275.)

The contractors' appeal came before the House of Lords and was dismissed. The appeal is reported in THE TIMES for 20 April 1956.

Notes and Notices

NOTICES

Ninth General Meeting, Tuesday 19 June 1956 at 6 p.m. The Ninth General Meeting of the Session 1955–56 will be held on Tuesday 19 June 1956 at 6 p.m. for the following purposes:

To read the Minutes of the Eighth General Meeting held on 15 May 1956; formally to admit new members attending for the first time since their election.

To read the report of the Scrutineers appointed to examine the voting papers for the election of the Council for the Session 1956–57.

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A. [*F*], to read a paper on 'Modern Church Design'.

(Light refreshments will be provided before the meeting.)

Session 1955–1956. Minutes VIII. At the Sixth General Meeting of the Session 1955–1956 held on Tuesday 10 April 1956 at 6 p.m., Mr. C. H. Aslin, C.B.E., President, in the Chair.

The meeting was attended by about 560 members and guests.

The Minutes of the Fifth General Meeting held on Tuesday 6 March 1956 were taken as read, confirmed and signed as correct.

The President spoke on the presentation of the Royal Gold Medal 1956 to Dr. Walter Gropius (H.C.M., U.S.A.), and called upon Sir Herbert Read, D.S.O., M.C., Litt.D., M.A., Professor Sir William Holford, M.A., P.P.T.P.I., F.I.L.A. [*F*], Dr. Nikolaus Pevsner, C.B.E., M.A., F.S.A. [*Hon. A*], Dr. J. Leslie Martin, M.A. [*F*], Mr. J. M. Richards [*A*], and Mr. E. Maxwell Fry, C.B.E. [*F*], who also spoke.

The President then asked Sir Percy Thomas, O.B.E., LL.D., D.L. (Past President) and Sir Howard Robertson, M.C., A.R.A., S.A.D.G. (Past President), (two Royal Gold Medallists), to escort Dr. Gropius to the platform.

Having been invested with the Medal, Dr. Gropius expressed his thanks for the honour conferred upon him.

The proceedings closed at 6.56 p.m.

Session 1955–56. Minutes IX. At a Special General Meeting of the Session 1955–56 held on Tuesday 17 April 1956 at 6 p.m.

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., Vice-President, in the Chair.

The Chairman explained that the meeting had been called for the purpose of considering and, if thought fit, approving the Council's recommendation for the revision of Bye-law 43. The proposed amendments had been set out on page 212 of the March issue of the JOURNAL.

Mr. Kenneth M. B. Cross, M.A., Vice-President, having given a brief résumé of the reasons for the proposed amendments, then moved the following resolution:—

'That subject to the approval thereof by the Lords of Her Majesty's Most Honourable Privy Council the amendment to Bye-law 43 as set forth in the notice calling this meeting but with sub-paragraph (*e*) thereof varied in accordance with the wording now approved by this meeting be made and adopted by the Royal Institute.'

In moving the Resolution he asked authority of the meeting to substitute the following sub-paragraph (*e*) for that set out in the notice calling the meeting:—

'(*e*) In or upon the bonds, debentures, debenture stock, mortgages, obligations or securities or the fully paid guaranteed or preference or ordinary stock or shares or ordinary preferred or deferred or other fully paid stock or shares of any company incorporated under any general Act of the United Kingdom Parliament being stock or shares which are at the time of making the investment quoted on the London Stock Exchange. Provided always that no investment shall be made in any ordinary stocks or shares unless the Company shall have an issued ordinary share capital of not less than one million pounds and shall have paid dividends thereon at the rate of at least five per cent per annum for at least four years prior to the date of the investment and that the total amount at any time standing invested in ordinary stocks and shares as shown by the books of the Royal Institute shall not exceed thirty-three and one-third per cent of the total amount at such time standing invested in any of the investments hereby authorised as appearing by such books. For the purpose of valuing the ordinary stocks and shares held by the Royal Institute the minimum price to be taken for each security shall be the cost price thereof to the Royal Institute; or'.

The Resolution having been moved by Mr. Cross and seconded by Mr. W. A. Allen [*A*] was put to the vote of the meeting and was passed unanimously.

Mr. Allen announced that a Special General Meeting would be held on Tuesday 1 May 1956 at 6 p.m., prior to the Annual General Meeting, for the purpose of confirming the Resolution which had just been passed.

The proceedings closed at 6.10 p.m.

Session 1955–1956. Minutes X. At a Special General Meeting, held on Tuesday 1 May 1956 at 6. p.m. Mr. C. H. Aslin, C.B.E., President, in the Chair.

The Minutes of the Special General Meeting held on Tuesday 17 April 1956 were taken as read, confirmed and signed as correct.

The President announced that the Special General Meeting had been called for the purpose of confirming the Resolution passed at the Special General Meeting held on Tuesday 17 April 1956 approving the adoption of the revised Bye-law 43.

Mr. E. D. Jefferiss Mathews, O.B.E., Hon. Secretary, moved that the following Resolution passed at the Special General Meeting held on 17 April 1956 be confirmed:—

'That subject to the approval thereof by the Lords of Her Majesty's Most Honourable Privy Council the amendment to Bye-law 43 as set forth in the notice calling this meeting but with sub-paragraph (*e*) thereof varied in accordance with the wording now approved by this meeting be made and adopted by the Royal Institute.'

Mr. Thomas E. Scott, C.B.E., Hon. Treasurer, seconded the Resolution.

The President then put the Resolution to the Meeting and it was carried.

The proceedings closed at 6.10 p.m.

Session 1955–1956. Minutes XI. At the One Hundred and Eighteenth Annual General Meeting held on Tuesday 1 May 1956 at the close of the Special General Meeting.

Mr. C. H. Aslin, C.B.E., President, in the Chair.

The meeting was attended by about 200 members and guests.

The Minutes of the Sixth General Meeting held on Tuesday 10 April 1956 were taken as read, confirmed and signed as correct.

The following members attending for the first time since their election were formally admitted by the President:—

Fellows: Cyril Adler, P. J. Barbary, Michael Barnett, G. M. Boon, L. A. Butterfield, J. H. Davidson, D. I. Stratton Davis, W. H. Gill, A. F. Hare, Richard Jaques, P. J. Mabley, L. W. Nunn, A. J. Parfitt, Michael Pattrick, A. J. P. Powell, G. G. Shenstone, A. L. Tamkin, R. G. D. Vernon, John Wright.

Associates: S. L. Barclay, Joseph Beaman, C. A. I. Belcher, A. S. Bennett, Peter Blewett, J. M. Bowley, R. C. Burnie, P. T. Calnan, D. H. Charlton, Alexander Chrystal, K. A. Coombs, E. G. Corline, G. N. Couchman, R. H. Counsell, D. G. Dalton, P. J. A. Dalton-Morris, D. C. Dean, G. W. Edmands, W. F. A. Evans, D. H. W. Griffith, C. A. Hartridge, Miss A. E. Heyworth, C. A. W. Horne, C. P. Howells, A. W. Johns, H. H. A. Leonard, R. P. McCaffrey, R. D. Mirrington, Hans Noak, S. W. Peachment, K. D. Pearson, D. A. Penning, B. L. Prynn, D. N. Purkiss, R. G. Quick, P. A. Radinger, S. W. Rickard, J. R. Steerwood, M. Y. Thackeray, W. P. Thorington, R. G. Tulley, A. J. Whatling.

Licentiates: A. G. Backhouse, F. W. Coles, Leo Creak, James Gillis, E. G. Harker, G. W. Hill, H. R. Holmes, J. L. Kelf, A. P. Taylor.

The President formally presented the Report of the Council and Committees for the official year 1955–1956 and moved that the Report be received. The Hon. Secretary seconded the motion and a discussion ensued.

The motion having been put from the Chair it was resolved that the Report of the Council and Committees for the official year 1955–56 be received.

On the motion of the President a hearty vote of thanks was passed to Mr. E. D. Lyons [*A*] and Mr. John Ratcliff, O.B.E. [*F*], for their services as Honorary Auditors for the past year.

Mr. E. D. Lyons [*A*] and Mr. John Ratcliff, O.B.E. [*F*], were re-nominated for election as Honorary Auditors for the ensuing year of office.

The proceedings closed at 7.5 p.m.

R.I.B.A. Kalendar. The 1956–57 issue of the Kalendar will be published in the autumn and the last day for receiving changes of address for inclusion in that issue will be 31 May. This date applies to *all* members and Students, both in the United Kingdom and overseas.

National Trust for England, Wales and Northern Ireland and National Trust for Scotland. As a corporate subscribing member of the National Trusts the R.I.B.A. has a limited number of membership tickets which entitle holders to admission to properties under the management of the Trusts. Any member intending to visit a property may apply to the Secretary for the use of a ticket, which must be returned to the R.I.B.A. on the conclusion of the visit.

BOARD OF ARCHITECTURAL EDUCATION

Intermediate Design Prize Competition. In the United Kingdom, 275 competitors took part in the Intermediate Design Prize 'en loge' competition. The following competitors have been selected to proceed with the final drawings for the competition:

John M. V. Bishop (School of Architecture, Edinburgh College of Art), Joseph R. Blackburn (School of Architecture, Edinburgh College of Art), Peter A. Crighton (School of Architecture, College of Art, Leicester), Michael B. Everitt (School of Architecture, College of Art, Leicester), Brian B. Fowle (Dept. of Architecture, The Northern Polytechnic, London), P. G. Koulermos (School of Architecture, The Polytechnic, Regent Street London). John C. C. Meunier (Liverpool School of Architecture, University of Liverpool), Frederick D. Parkes (The Nottingham School of Architecture), John R. Peverley, (School of Architecture, Canterbury College of Art), W. Henry Roberts (Welsh School of Architecture, The College of Technology and Commerce, Cardiff), John Robinson (School of Architecture, King's College, Newcastle upon Tyne), Francis B. Sayer (Dept. of Architecture, University of Sheffield), Thomas White (School of Architecture, Edinburgh College of Art), Peter J. Winchester (School of Architecture, The Polytechnic, Regent Street, London).

The Victory Scholarship Competition. In the United Kingdom 129 competitors took part in the Victory Scholarship 'en loge' Competition. The following competitors have been selected to proceed with the final drawings for the competition:

Clive R. Brooks (School of Architecture, College of Art, Leicester), Peter Hall (School of Architecture, Cambridge University), John B. Hilling (Welsh School of Architecture, The College of Technology and Commerce, Cardiff), James H. Johnson (Dept. of Architecture, The Northern Polytechnic, London), John A. Kennett (School of Architecture, The Polytechnic, Regent Street, London), Andrew Merrylees (Glasgow School of Architecture, The Royal Technical College, Glasgow), Walter D. Paterson (Glasgow School of Architecture, The Royal Technical College, Glasgow), William M. Toner (Glasgow School of Architecture, The Royal Technical College, Glasgow), Fred Woodhead (Dept. of Architecture, University of Sheffield), Thomas Jeffrey Yandell.

R.I.B.A. Examination in Professional Practice and Practical Experience. The Examination in Professional Practice and Practical Experience was held in London and Edinburgh on 9 and 10 April 1956. Of the 102 candidates examined, 81 passed and 21 were relegated. The successful candidates are as follows:

Anag: P. D.
Ashton: Ronald
Baird: R. L. J.
Barber: John P.
Bermingham: P. J.
Billam: D. M.
Billingham: M. H.
Bishop: K. G.
Briggs: M. J.
Brown: David
Brownlee: Brian T.
Cashin: A. M.
Cawthra: M. F. E.
Charles: W. R.
Cherry: J. C.
Chuter: N. F.
Collins: Bryan
Cook: S. G.
Cradock: P. P.
Cross: M. M.
Davies: C. F.
Dewar: David
Dixon: M. J.
Durell: Miss Lilian Adelaide (now Mrs. Henry Stephenson)
Evans: G. T.
Fielding: M. L.
Finlason: E. G.
Fitzgerald: J. D.
Ford: K. W.
Foulsham: J. C.
Fowler: A. J.
France: A. V.
France: J. K.
Gibson: R. P.
Gill: R. G. S.
Goodfellow: R. E.
Gray: J. R.
Guest: Roger
Hansford: B. H.
Hills: D. W.
Hodgson: Ian R.
Jess: J. H.
Johnson: A. G.
Keen: D. F. C.
Kinnair: Jack
Klapprott: Rainer
Kolek: Z. E.
Mark: Frederick
Martin: D. R. J.
Meehan: K. J. C.
Meyersohn: E. M.
Montague: H. T.
Morgan: Llewllyn
Munro: H. A.
Osborne: A. H.
Pilling: C. J.
Pilton: R. G. A.
Plester: M. N. G.
Poole: G. P. F.
Ramsay: P. A. B.
Reidy: W. M.
Rennie: J. N.
Richards: Bill
Ritchie: W. C.
Roberts: David
Robinson: J. W.
Rudowski: Andrzej
Sadler: A. J.
Sharpe: D. M. C.
Simmonds: D. C.
Smith: J. D.
Stevens: B. J.
Stimpson: A. J.
Surtees: John
Tong: Peter
Wheeler: M. S. H.
Whittaker: Eric
Williams: E. T.
Williams: Watcyn
Winther: P. W. V.
Worthington: Brian

COMPETITIONS

New National Opera House at Benelong Point, Sydney, Australia: International Competition. The Government of the State of New South Wales invite architects who are members of their respective architectural institutes in any country in the world to submit designs in competition for a proposed National Opera House, to be erected on Benelong Point, Sydney, Australia.

Assessors: Professor H. I. Ashworth, M.A.(Arch.), F.R.A.I.A. [*F*], Sydney; Mr. Cobden Parks, F.R.A.I.A. [*F*], Sydney; Dr. J. L. Martin, M.A. [*F*], London: Mr. Eero Saarinen, A.I.A., Michigan, U.S.A.

Premiums: £A5,000, £A2,000, £A1,000.

Last day for despatching designs: 3 December 1956.

Every intending competitor was required to register his name and address in writing with the Secretary of the Opera House Committee not later than 15 *March* 1956.

Conditions may be obtained on application to the Secretary of the Opera House Committee, c/o Department of Local Government, Bridge and Philip Streets, Sydney, Australia.

Deposit: £A10.

International Competition of Ideas Regarding the Surroundings of Cologne Cathedral. The City of Cologne invites planners to submit in competition schemes for the redevelopment of the area surrounding Cologne Cathedral.

Assessors: Herr Kelter, Cologne; Herr Riphahn, Cologne; Professor Hillebrecht, Hanover; Herr Steiner, Zürich; Professor Weyres, Cologne; Professor Baader, Bonn; Herr Pecks, Cologne; Professor Leibbrand, Zürich; Herr Schüssler, Cologne; Dr. Adenauer, Cologne.

Premiums: 20,000 DM, 14,000 DM, 10,000 DM, 6,000 DM.

The City of Cologne will also purchase 5 entries at 2,000 DM each.

Last day for despatching designs: 12 noon, 31 August 1956.

Competitors may send their entries through the diplomatic representatives of the German Federal Republic. Entries arriving after 14 September will not be considered.

Conditions may be obtained on application to Städtebauamt der Stadt Köln, Stadthaus, Gürzenichstrasse.

Deposit 100 DM.

International Competition, Geneva. The Department of Public Works for the Republic and Canton of Geneva are promoting an International Contest of Ideas for the layout of the Place des Nations and of the Approach to the Secretariat of the Palais des Nations in Geneva. Assessors: M. Jean Dutoit, Prof. Sir Patrick Abercrombie [*F*], M. Eugène Beaudouin, M. Jacques Carlu, M. Arnold Hoechel, M. Giulio Minoletti, M. Werner Moser. The Assessors will work in consultation with representatives of The European Office of the United Nations, The City of Geneva, The Chief of Police of Geneva, The Secretary General of the Department of Public Works.

Premiums: 40,000 Swiss francs to be awarded to a maximum of 5 entries; 10,000 Swiss francs for the purchase of the premiated entry.

Last day for the despatch of entries: 6 p.m. 15 April 1957.

Last day for questions: 15 August 1956.

Conditions may be obtained on application to the Department of Public Works, 6, rue de l'Hôtel de Ville, Geneva.

Deposit: 50 Swiss francs, returnable if an entry is submitted.

The conditions of this competition have been approved by the I.U.A.

International Competitions. The following International Competitions are at present being considered by the International Union of Architects, who are negotiating the conditions with the promoters in each case.

(*a*) Competition for the construction of the Sanctuary of the Madonna delle Lacrime in Syracuse.

Promoters: the Working Committee for the Sanctuary of the Madonna delle Lacrime.

(*b*) Competition for a monument in New Delhi to commemorate the 2,500th anniversary of Buddha's Enlightenment.

Promoted by the Government of India.

In these cases the Secretariat of the I.U.A. have examined the published conditions of the Competition and found them to be generally unsatisfactory and not in accordance with the standard regulations for International Competitions approved by UNESCO (R.I.B.A. Kalendar, page 812) on the advice of the International Union of Architects. Member nations of the I.U.A. have accordingly been warned not to participate, but negotiations are taking place between the I.U.A. and the promoters with a view to bringing the published conditions into conformity with the standard regulations and a further note will be published as soon as the conditions are reported by the I.U.A. to be satisfactory.

COMPETITION RESULT

Dwellings for Old People, East Horsley, Surrey: Architects' Benevolent Society.

1. Messrs. Clifford Culpin and Partner [*F*/*A*]. 2. Mr. Douglas Lanham [*A*] and Mr. Eric Barber [*A*]; Mr. Robert Davison [*A*] and Mr. Andrew Artur.

Commended: Miss P. F. G. Cavanagh [*A*] and Mr. S. D. Dray [*A*]; Mr. Michael Hennings [*A*].

ALLIED SOCIETIES

Changes of Officers and Addresses

Essex, Cambridge and Hertfordshire Society of Architects, Colchester and District Chapter. Chairman, Roy Gould [*A*]. *West Essex Chapter:* Chairman, F. G. Frizzell, A.M.T.P.I. [*A*]. Hon. Secretary, A. P. Roach [*A*], 29 Park Drive, Romford, Essex.

York and East Yorkshire Architectural Society, Hull and District Chapter. Chairman, W. Gregory Wilson [*F*], Hon. Secretary, C. E. Tooley, D.S.C. [*L*], Ruskin Chambers, Scale Lane, Hull.

Glasgow Institute of Architects. President, Thomas S. Cordiner [*F*].

Cape Provincial Institute of Architects. President, H. A. P. Kent, A.M.T.P.I. [*A*].

Institute of Southern Rhodesian Architects. President, J. L. Gauldie, A.M.T.P.I. [*A*].

Manitoba Association of Architects. The Association's address is changed to 966 Dorchester Avenue, Winnipeg 9, Manitoba (Canada).

Institute of Architects of Malaya. President, H. L. Bloomfield [*F*].

Suffolk Association of Architects. Annual Dinner. The annual dinner of the Suffolk Association of Architects was held on Friday 13 April at Ipswich. Mr. B. W. J. Olley [*A*], President, was in the Chair, and among the guests were Mr. C. H. Aslin, C.B.E., President R.I.B.A., and Mrs. Aslin; the Deputy Mayor of Ipswich, Alderman C. G. Roper; the Lord Bishop of St. Edmundsbury and Ipswich; Mr. C. T. Dawson, President of the Suffolk and North Essex Law Society; Mr. Humphrey C. Boardman [*A*], President of the East Anglian Society of Architects and of the Norfolk and Norwich Association of Architects, and Mrs. Boardman; Mr. C. J. Tomkins [*F*], Secretary of the Norfolk and Norwich Association of Architects, and Mrs. Tomkins; and Mr. C. D. Spragg, C.B.E., Secretary R.I.B.A.

Mr. Olley, proposing the toast of the R.I.B.A., said every endeavour should be made—by persuasion if possible but by legislation if persuasion failed—to ensure that an architect was employed for every kind of building work. Mr. Aslin, however, replying to the toast, disagreed, saying that he was against legislation of this kind and what was needed was for architects to be so good that the need for their services became firmly established in the public mind. He also emphasised that today architects had to concern themselves with economic considerations. It was no good producing what appeared to be good architecture but at a high price.

The Deputy Mayor proposed the toast of the Suffolk Association and the immediate Past President, Mr. Eric C. R. Sandon [*A*], replied. The Honorary Secretary, Mr. L. J. Grigg [*A*], proposed the toast of the visitors and response was made by the Lord Bishop and Mr. C. T. Dawson.

Essex, Cambridgeshire and Hertfordshire Society of Architects, Hertfordshire Chapter. Certificate of Craftsmanship. The Hertfordshire Chapter of the Essex, Cambridge and Hertfordshire Society of Architects are inviting nominations for the award of the Certificate of Craftsmanship for 1955–56 in respect of work executed in the County of Hertfordshire within the past two years,

The award is made in two classes:—

1. For general excellence of workmanship.
2. For an individual piece of workmanship.

Further particulars from the Hon. Secretary, W. Wesley Turney [*L*], of 63 Wood Street, Barnet, Herts.

Exhibition at Preston of Modern British Architecture. The Preston, Blackburn and District Society of Architects have obtained from the Arts Council their exhibition *Ten Years of British Architecture* and it is on view until 2 June to the public at the Harris Art Gallery, Preston, by courtesy of the Art Gallery and Library Committee of Preston. This exhibition provides an opportunity for architects and the public in the highly populated areas of north and east Lancashire to see an important exhibition which would not normally be available outside London and the larger cities.

GENERAL NOTES

London County Council. Qualifying Examination for the Office of District Surveyor. An examination for certificates of proficiency to perform the duties of district surveyor will be conducted in London in the week beginning 15 October 1956. The minimum age limit for candidates is 25. Possession of this certificate is necessary for appointment to positions as District Surveyor (salary scales £1,500 to £2,900 a year) or as Assistant District Surveyor (salary scale £1,184 to £1,353 + allowance of £56 a year). Subsequent examinations will be held annually.

Apply to The Architect to the Council (AR/ED/CTB), County Hall, Westminster Bridge, S.E.1, for application forms and further particulars.

University of Toronto, Fellowships in Town Planning. The Division of Town and Regional Planning in the School of Architecture, the University of Toronto, offer several Fellowships for the study of town and regional planning in the University. While these are generally intended for Canadians now working in Britain or for young British architects intending to emigrate to Canada, one is an open Fellowship. This last offers more than $1,200 to cover a seven or eight months' course at the University and is sufficient for an unmarried man. Professor Gordon Stephenson [*F*], who is now at Toronto University, informs us that a graduate of this course could easily obtain a salary of $4,000 to $5,000 on completion because there is a great dearth of qualified town planners in Canada, where populations are growing fast. Applications for this year must be submitted by 31 May to Professor Gordon Stephenson, Division of Town and Regional Planning, School of Architecture, University of Toronto, Toronto 5, Ontario. The Secretary of the R.I.B.A. Board of Architectural Education and the Editor of the R.I.B.A. JOURNAL have a limited number of application forms which they will provide on request.

Truscon Travelling Scholarship. The Truscon Travelling Scholarship for the study of reinforced concrete work offered by The Trussed Concrete Steel Company Limited, details of which were given in the JOURNAL of February 1956, has been awarded to Mr. Graham Winteringham, Dip.Arch.(Birm.) [*A*].

Mr. Winteringham will be accompanied by Mr. B. W. Cooper, B.Sc., D.I.C., A.M.I.Struct.E., of the Company's staff, to whom a similar scholarship has been awarded.

Office Building at Peterborough. Mr. Ian Collin Brown, Dip. Arch. (The Polytechnic) [*A*] points out to us that he is not the Ian C. Brown [*A*] mentioned as having worked as assistant architect on this building, which was illustrated in the March JOURNAL. The assistant architect was Mr. Ian Clinton Brown [*A*] who was elected Associate last October and whose name therefore does not appear in the current Kalendar.

R.I.B.A. Golfing Society. The match with the Building Alliance Golfing Society was played this year at Royal Wimbledon Golf Club on 25 April. Both teams turned out in force, singles being played in the morning. At lunch time the B.A.G.S. led by 11 to 9. The architects had hopes of improving the position in the afternoon but the B.A.G.S. managed to increase their lead, the final result of the match being 17 matches to 11.

A.B.S. Ball Committee. Until now the A.B.S. Ball Committee have stored their Ball props in the R.I.B.A. basement. Unfortunately, with the increased pressure on R.I.B.A. storage space—partly due to the imminent rebuilding of 68 Portland Place—it is no longer possible to make this accommodation available to them. The Ball Committee would therefore much appreciate the lease or loan of dry storage space anywhere within easy reach of London. The space required is 12 ft. by 8 ft. by 6 ft.

The address of the Ball Committee (Chairman, Mr. C. J. Epril [*F*]) is 55 Pall Mall, S.W.1 (WHItehall 1182/3/4).

Membership Lists

ELECTION: 10 APRIL 1956

The following candidates for membership were elected on 10 April 1956.

AS FELLOWS (57)

Adams: John Treadwell [*A* 1944], Ipswich.
Adler: Cyril [*A* 1946].
Armstrong: Alfred George [*A* 1932], Reading.
Baldwin: Edward Thomas [*A* 1939], Coventry.
Barbary: Peter John, O.B.E., G.M., T.D. [*A* 1948], Penzance.
Barnes: Alfred Stanley, Dipl.Arch.(L'pool) [*A* 1946], Birkenhead.
Barnes: William Edwin [*A* 1939], Letchworth.
Beecroft: Charles Roy [*A* 1936], Bristol.
Booth: Raymond Richard [*A* 1943].
Bradley: Frank [*A* 1944], Bolton.
Cordiner: Albert Dick, A.M.T.P.I. [*A* 1928], Glasgow.
Dannatt: Anthony Richard [*A* 1940], Chelmsford.
Davidson: James Henderson, Dip.Arch.(Abdn.) [*A* 1926], Edinburgh.
Elsey: Arthur Valentine, A.A.Dipl. [*A* 1936].
Foster: Jack Stroud [*A* 1938], New Malden.
Foyle: Arthur Montague, B.A.(Arch.)(Lond.), A.M.T.P.I. [*A* 1939].
Gearey: Keith Warren, B.Arch.(L'pool) [*A* 1933], Liverpool.
Hall: Ruthven Oliphant, A.A.Dipl. [*A* 1947].
Hammett: Richard Derek, A.A.Dipl., A.M.T.P.I. [*A* 1940].
Hare: Albert Frederick [*A* 1945].
Harvey: Hammond Joseph, A.R.I.C.S. [*A* 1937].
Innes: Douglas William, Dip.Arch.(Abdn.) [*A* 1930], Aberdeen.
Jaques: Clifford Sydney, Dip.Arch.(The Polytechnic) [*A* 1945].
Latheron: James Thompson, B.Arch.(Dunelm), A.M.T.P.I. [*A* 1937], Sunderland.
Leonard: Simon Aloysius, B.Arch.(L'pool) [*A* 1935], Dublin.
Ling: Arthur George, B.A.(Arch.)(Lond.), M.T.P.I. [*A* 1939], Coventry.
Mabley: Philip John [*A* 1940].
Maclennan: John, Dip.Arch.(Abdn.), F.R.I.C.S. [*A* 1927], Aberdeen.
Mitchell: Tom Noel, B.Arch.(L'pool) [*A* 1932], Liverpool.
Moore: Shirley Simpson [*A* 1931], Leicester.
Moya: John Hidalgo, A.A.Dipl. [*A* 1944].
Norton: Charles Alfred Roger, A.A.Dipl. [*A* 1940].
Nunn: Leslie Watson [*A* 1943], Nottingham.
Orchard: Herbert John [*A* 1935], Haslemere.
Pike: Charles Henry [*A* 1934].
Powell: Arnold Joseph Philip, A.A.Dipl. [*A* 1944].
Redwood: Reginald Seymour [*A* 1929], Bristol.
Riddell: James Rattray, Dip.Arch.(Abdn.) [*A* 1930], Aberdeen.
Ritchie: James Watson, D.A.(Edin.) [*A* 1926], Dundee.
Sawyer: Peter Ross, M.C., T.D., J.P. [*A* 1947], Winchester.

Schneider: Arnold, M.A.(Oxon), B.A.(Arch.) (Lond.) [*A* 1939].
Selby: Laurence John [*A* 1940], Southend-on-Sea.
Sharman: Reginald Percy [*A* 1935].
Smeed: Charles William James, Dipl.Arch. (U.C.L.) [*A* 1930].
Steer: Louis George [*A* 1942], Bridgwater.
Stokes: Horace William [*A* 1925], Birmingham.
Sturrock: Frederick Lamond [*A* 1939], Cape Town, S. Africa.
Treadgold: Paul Henry, A.A.Dipl. [*A* 1941].
Wales: (Mrs.) Mary Dorrien, Dipl.Arch.(Leeds). [*A* 1937], Skipton.
Wilson: James Mollison [*A* 1924].
Winton-Lewis: Basil Aelfred Peter, Dipl.Arch. (U.C.L.) [*A* 1941].
Woolmer: Stanley Charles, M.T.P.I. [*A* 1938], Singapore, Malaya.
Wright: John, A.A.Dipl. [*A* 1948].

and the following Licentiate who has passed the qualifying Examination:

Crowe: Cecil John, T.D., Nairobi, Kenya.

and the following Licentiates who are qualified under Section IV, Clause 4(*c*) (ii) of the Supplemental Charter of 1925:

Dannatt: Arthur Richard, Chelmsford.
Richardson White: William, Mansfield.
Rudd: John Pearson, Middlesbrough.

AS ASSOCIATES (79)

Arnold: Gordon Beckley.
Ashdown: David Grantham, B.Arch.(L'pool), Hertford.
Bedford: John, Dipl.Arch.(Oxford), Oxford.
Bellotti: Leopold Lucas, Dip.Arch.(Manchester), Manchester.
Benton: Peter Albert Stanley, St. Albans.
Berriman: Ian Palmer, B.E.(Arch.) (Adelaide).
Berryman: James Sharples, Blackpool.
Burnie: Roy Cedric, Fetcham.
Burnside: Dennis Theodore, Dip.Arch.(Manchester), Blackpool.
Burton: Michael, B.Arch.(L'pool), Huddersfield.
Butterworth: John, B.A.(Sheffield), Sheffield.
Cain: Michael, A.A.Dipl.
Carter: Raymond Richard George, Bournemouth.
Casson: William Elmar, Dip.Arch.(Dunelm), Whitley Bay.
Chell: Rex Eustace Joseph, Coventry.
Chia: (Miss) Kim Hiok, B.Arch.(Melbourne), Singapore, Malaya.
Corline: Edward George, Windsor.
Cottingham: George Eyles, Dip.Arch.(Nottm.), Spalding.
Evans: Gwyn Owen, Dip.Arch.(Sheffield), Llanbedr.
Ferrier: John, Dip.Arch.(Abdn.), Montrose.
Fortune: John Frederick, B.Arch.(Dunelm), Maryport.
Garner: Brian Joseph Robinson, Dip.Arch. (Dunelm), Sunderland.
Gee: Stuart, Dip.Arch.(Sheffield), Halifax.
Gould: Malcolm John.
Gray: David Duncan, Dip.Arch.(Abdn.), Aberdeen.
Griffiths: John Pankhurst, Dip.Arch.(Manchester), Bristol.
Harries: Michael Vaughan, B.Arch.(Wales), Cardiff.
Heath: Derek Anthony, Woodford.
Henderson: Douglas Manson, D.A.(Edin.), Edinburgh.
Horne: John Silvester, M.A.(Cantab.), B.Arch. (L'pool.), Wendover.
Ingham: (Miss) Eileen Mary, B.Arch.(L'pool), Lytham St. Annes.
Ingram: Alexander Leslie, D.A.(Edin.), Edinburgh.
James: Leslie Kevin, Hawera, New Zealand.
Jameson: Gordon, Marden.
Jamieson: Ronald Jeffrey Clark, D.A.(Edin.), Joppa.
Jenkins: Sylvan Lewis, B.Arch.(Wales), Newport, Mon.
Jones: Albert Ellwood Eaton, Leeds.
Keith: Graham Alastair, Dip.Arch.(Birm.), Cromer.
King: Richard John, Caterham.
Kingsnorth: Bryan William, Dip.Arch.(The Polytechnic), Southampton.
Lee: Soo Chuan, B.Arch.(Melbourne), Kuala Lumpur, Malaya.
Lee: William Rees, Dip.Arch.(Cardiff), Blaina.
Littlejohn: Roy Derek, Bournemouth.
McArthur: Thomas Drysdale, Dip.Arch.(Auck., N.Z.), Lower Hutt, New Zealand.
McCracken: Findlay Jack, D.A.(Glas.), Larbert.
Macgregor: Alan Fraser Dundas, D.A.(Edin.), Edinburgh.
Mackenzie, Kenneth Richardson, Dip.Arch. (Abdn.), Elgin.
McRobert: John Boag, Dip.Arch.(Abdn.), Aberdeen.
Mackie: John Stuart, Dip.Arch.(Sheffield), Halifax.
Marsh: Horace George.
More: James Bremner, Dip.Arch.(Nottm.), Nottingham.
Morgan: Adrian Kirkpatrick Winstanley, Strood.
Morrice: John, Dip.Arch.(Abdn.), Aberdeen.
Nuttgens: Patrick John, M.A., D.A.(Edin.), Edinburgh.
Olumuyiwa: Oluwole Olusegun, Dip.Arch. (Manchester).
Parsons: Eric Michael, Dip.Arch.(Sheffield), Newport, Mon.
Penman: Breton Clyde, Hong Kong.
Philpott: Richard Bernard, Warrington.
Purkiss: Donald Newton, Saffron Walden.
Reed: John Dayman, Dip.Arch.(Nottm.), Nottingham.
Ridgeway: James Michael, Dip.Arch.(Sheffield), Sheffield.
Roberts: (Miss) Ann Ruth, B.A.(Manchester).
Rodger: William Daley, D.A.(Edin.), Kirkcaldy.
Shinn: Clive Eric, Norwich.
Smith: David Leonard, Oxford.
Smith: Ronald Frederick, Dip.Arch.(Birm.), Olney.
Staines: David, Whitley Bay.
Stevenson: Harold, B.A.(Manchester), Manchester.
Strang: Robert Andrew, D.A.(Glas.), Glasgow.
Sturges: Harold William.
Tasker: Sidney Hawthorne, Dip.Arch.(Manchester), Nelson.
Taylor: Geoffrey, Dipl.Arch.(Northern Polytechnic), Marlow.
Toffolo: Nori, D.A.(Glas.), Whitecraigs.
Varty: Derek, Dip.Arch.(Dunelm), Gateshead.
Watson: Roy Lawrence, Portsmouth.
Watt: Arthur Hay, Dip.Arch.(Abdn.), Huntly.
Weston: Graham, Dip.Arch.(Nottm.), Allestree.
Whittaker: John Wallace, Dip.Arch.(Sheffield), Belfast.
Wyatt: Alan James, Southampton.

AS LICENTIATES (42)

Backhouse: Arthur Graham.
Benbow: Kenneth Mollan, F.R.I.C.S. East Grinstead.
Biggs: William James.
Bower: Harry Thompson, Grimsby.
Broad: Leyton Samuel.
Coles: Frank William.
Creak: Leo.
Davies: Joseph Maldwyn, Wrexham.
Devlin: George Edwin, Doncaster.
Edwards: Eric William, Derby.
England: Bernard, Preston.
Gear: Arthur Henry.
Gillis: James, F.R.I.C.S.
Guildford: Ronald George Edward.
Hands: James Thomas.
Harrison: Frank Podesta.
Hasker: Frederick Leslie.
Hill: George William.
Hoban: Francis Joseph, Chester.
Holmes: Henry Robert.
Holmes: William Walter.
Hooker: Arthur Joseph, Wrexham.
Hoskings: Kenneth le Garde.
Johns: William Henry Alun, Watford.
Lister: James, Kirkcaldy.
Longman: Alfred Ernest, Keswick.
McAlery: John, Belfast.
McGahon: Thomas Pius, Dundalk.
Mansell: George Hennah.
Mason: John Henry, Romford.
Norris: John Floyd, Exeter.
Porteus: Stuart Ian.
Press: Frederick James, J.P., Rugby.
Salmon: Albert James, A.R.I.C.S., A.M.T.P.I.
Smith: Clarence, Doncaster.
Symonds: Robert McDowall.
Taylor: Albert Percy, Belper.
Tims: Thomas Owen, Cardiff.
Tobin: Robert Joseph.
van-Nuffelen: Alphonse Albert.
Wardle: Rupert Leopold McLean, Maidstone.
Wells: Roger Philip Basil, Grimsby.

ELECTION: 19 JUNE 1956

An election of candidates for membership will take place on 19 June 1956. The names and addresses of the candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday 4 June 1956.

The names following the applicant's address are those of his proposers.

AS FELLOWS (2)

The following Licentiates are qualified under Section IV, Clause 4 (*c*) (ii) of the Supplemental Charter of 1925:—

Fletcher: Herbert William, 21 Dumfries Place, Cardiff; 4 St. Johns Place, Whitchurch, Cardiff. C. F. Jones, G. H. Griffiths, Sir Percy Thomas.

Smith: Thomas Harold, City Architect's Department, Hull; 14 Calvert Road, Hull. W. B. Wheatley, H. Andrew, F. J. Horth.

AS ASSOCIATES (94)

The name of school or schools after a candidate's name indicates the passing of a recognised course.

Anag: Peter David (Special Final), 141 Park Avenue, Orpington, Kent. Clifford Culpin, J. F. Howes, F. L. Jackman.

Archer: Gerald Lawson, Dip.Arch.(Sheffield) (Univ. of Sheffield, Dept. of Arch.), Holly Cottage, Runsell Green, Danbury, Essex. Prof. Stephen Welsh, Harold Conolly, Denis Senior.

Ashton: Ronald (Special Final), 8 Whalley Road, Shuttleworth, Ramsbottom, Lancs. Applying for nomination by the Council under Bye-law 3(*d*).

Baird: Robert Leslie John (Final), 33 Waverley Drive, Bangor, Co. Down, N. Ireland. Val Smyth, B. Cowser, R. H. Gibson.

Beaton: Donald George, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 20A Montgomery Street, Edinburgh, 7. A. D. Haxton, R. F. Hutchison, J. Holt.

Billam: Derek Mann (Final), 'Clovelly', Styal

Road, Gatley, Cheshire. L. C. Howitt, Cecil Stewart, Edgar Sutcliffe.

Billingham: Mervyn Hugh (Final), 'Polperro', 57 Wathen Road, Leamington Spa. H. Fedeski, T. M. Ashford, C. H. Elkins.

Bishop: Kenneth George (Special Final), 68 Newstead Avenue, Orpington, Kent. J. C. Clavering, C. V. Ponder, R. T. Boutall.

Briggs: Michael James (Final), 17 Scholemoor Avenue, Lidget Green, Bradford 7, Yorks. W. C. Brown, Eric Morley, Colonel R. B. Armistead.

Brodie: Edwin, Dip.Arch.(Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 56 Grampian Circle, Aberdeen. E. F. Davies, A. B. Gardner, J. G. Marr.

Brown: David (Special Final), 14 The High Gate, Kenton, Newcastle upon Tyne, 3. F. W. Harvey, R. N. Mackellar, C. A. Harding.

Carress: John Ralph, Dip.Arch.(Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 8, Causey Farm Road, Hayley Green, Nr. Halesowen, Worcs. Prof. R. A. Cordingley, C. E. M. Fillmore, Geoffrey Cox.

Cashin: Alfred Maurice (Final), Hill Crest, 35 Picton Avenue, Runcorn, Cheshire. Prof. L. B. Budden, Geoffrey Owen, T. L. Viney.

Cawthra: Malcolm Frank Emsley (Special Final), 'Aldbury', Northwich Road, Weaverham, Nr. Northwich, Cheshire. Applying for nomination by the Council under Bye-law 3(*d*).

Charles: William Raymond (Special Final), 50 Dillwyn Road, Sketty, Swansea. H. T. Wykes, E. E. Edmunds, D. J. Howells.

Cherry: John Cecil (Final), 2 Eustace Road, Chadwell Heath, Romford, Essex. J. S. Walkden, Thomas Sibthorp and applying for nomination by the Council under Bye-law 3(*d*).

Chuter: Norman Frederick (Special Final), Dormer Cottage, Woodham Park Way, West Byfleet, Surrey. R. T. Boutall, C. V. Ponder, Z. Sirotkin.

Collins: Bryan (Final), 66 Felsham Road, Putney, S.W.15. A. B. Waters, W. F. Howard, C. G. Bath.

Comrie-Smith: George Alan, Dip.Arch.(Queensland) (Passed a qualifying Exam. approved by the R.A.I.A.), c/o A.N.Z. Bank, 263 Strand, W.C.2. Prof. R. P. Cummings, E. J. A. Weller, J. M. Collin.

Constable: Gerald Brian, D.A.(Glas.) (Glasgow Sch. of Arch.), 67 Russell Street, Burnbank, Hamilton. Prof. W. J. Smith, A. G. Henderson, F. R. Wylie.

Cook: Stanley Gordon (Special Final), 248 Kent House Road, Beckenham, Kent. W. A. C. Ball and applying for nomination by the Council under Bye-law 3(*d*).

Cook: Thomas Howard, Dip.Arch.(Nottm.) (Nottingham Sch. of Arch.), 2 Jubilee Avenue, Grantham, Lincolnshire. J. G. Woollatt, T. N. Cartwright, J. W. M. Dudding.

Cradock: Peter Pollard (Final), 29 Burnell Gardens, Stanmore, Middlesex. J. S. Walkden, Horace Farquharson, D. H. McMorran.

Cross: Michael Maxwell (Special Final), 217 Petts Hill, Northolt Park, Middlesex. A. W. Kenyon, H. G. Huckle, J. M. Easton.

Davies: Clifford Frederick (Final), West Lodge, Tunstall Road, Sunderland. C. Leckenby, J. S. Syme, A. N. Thorpe.

Dewar: David (Special Final), 1 Stanley Avenue, Bilston, Midlothian. R. F. Hutchison, Donald Jack, A. C. S. Auld.

Dixon: Michael James (Final), 81 Peperharow Road, Godalming, Surrey. T. T. Cumming, Frederick Barber, A. C. Fairtlough.

Dowse: Christopher William, B.A.(Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 'Lealholm', The Villas, North Gosforth, Newcastle upon Tyne, 3. Prof. R. A. Cordingley, G. R. Clayton, Dr. W. A. Singleton.

Duguid: James Edwin, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.), 8 Ophir Gardens, Salisbury Avenue, Belfast. Prof. Stephen Welsh, H. B. Leighton, H. B. S. Gibbs.

Duncan: Thomas Hynd, D.A.(Edin.) (Edinburgh Coll of Art: Sch. of Arch.), 8 Baillie Street, Whitburn, West Lothian, Scotland. W. H. Kininmonth, Basil Spence, J. R. McKay.

Edwards: Colin Layton, B.Arch.(Wales) (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 42 Victoria Road, Barry, Glamorgan. Lewis John, Dr. T. A. Lloyd, C. F. Jones.

Evans: Gordon Thomas (Special Final), 30 Ranelagh Gardens, Stamford Brook Avenue, W.6. J. S. Walkden, H. H. Powell, D. J. Cole.

Fielding: Maurice Leslie (Special Final), 'Calder Cottage', Woodham Park Way, West Byfleet, Surrey. J. C. Clavering, C. V. Ponder, R. T. Boutall.

Finkle: Gerald Martin (Final), 17 Vincent Square, S.W.1. Frankland Dark, R. L. Banks, T. A. Eaton.

Finlason: Eric Guy (Final), 31 Martin Road, Mossley Hill, Liverpool. Dr. Ronald Bradbury, W. H. G. Dobie, T. M. Alexander.

FitzGerald: John Desmond (Special Final), 140 Grace Park Road, Drumcondra, Dublin, Ireland. P. J. Munden, J. V. Downes, Vincent Kelly.

Ford: Kenneth Wilfred (Special Final), 46 Whitworth Road, Plumstead, S.E.18. W. Mollison, S. F. Burley, C. G. Bath.

Foulsham: John Chester, B.Arch.(L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), Trevigue, Hailey Lane, Hertford, Herts. R. R. Young, Herbert Thearle, F. J. M. Ormrod.

Fowler: Arthur John (Special Final), 43 Fifth Avenue, Queens Park, W.10. Arthur Korn, Edwin Rice, Dr. R. Herz.

France: John Keith (Final), 17 Overhill Road, Stafford, Staff. A. C. H. Stillman, G. A. G. Miller, K. A. Lloyd.

Gainsborough: John (Final), 'Stroods', Fletching, Uckfield, Sussex. W. H. Watkins, A. S. Gray, K. E. Black.

Gibson: Ronald Page (Special Final), Stone Edge, Tickenham, Clevedon, Somerset. F. L. Hannam, E. H. Button, Eric Ross.

Gill: Ronald George Stuart (Special Final), 5 Collingham Road, S.W.5. Arthur Korn, J. F. Howes, F. L. Jackman.

Goodfellow: Roy Edward (Special Final), 67 Herschell Road, Leigh-on-Sea, Essex. E. H. Banks, A. G. Alexander, H. A. N. Medd.

Gray: John Russell (Special Final), 231 Bodmin Road, Whitleigh, Plymouth, Devon. E. U. Channon, H. J. Hammick, F. H. Allen.

Guest: Roger (Final), 9 Maple Road, Winton, Bournemouth. G. A. Crockett, L. S. Stanley, G. W. Jackson.

Hodgson: Ian Richard (Final), 11 Wildwood Grove, North End, N.W.3. Basil Spence, Sir Hugh Casson, J. S. Walkden.

Hunt: Bryan Montague, Dip.Arch.(Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 14 Silverdale Road, Heaton Chapel, Stockport, Cheshire. Prof. R. A. Cordingley, C. E. Pearson, H. T. Seward.

Jess: James Herbert (Special Final), Heatherdun, 1 Coolsara Park, Lisburn, Co. Antrim, Northern Ireland. T. W. Henry, E. D. Taylor, R. S. Wilshere.

Johnson: Arthur Gilbert (Special Final), 14 Purley Road, Edmonton, N.9. H. Andrew, F. J. Horth, Miss J. E. Townsend.

Keen: Denis Frederick Charles (Final), 72 Craven Park, Willesden, N.W.10. T. E. Scott, S. F. Burley, C. G. Bath.

King: Donald George (Final), 58 Dorset Avenue, Romford, Essex. Michael Waterhouse, Cedric Ripley, J. W. Mansel.

Kinghorn: David, Dip.Arch.(Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 5 Devanha Gardens West, Aberdeen. E. F. Davies, A. B. Gardner, J. G. Marr.

Kinnair: Jack (Final), 117 North Hill, Highgate, N.6. Thomas Sibthorp, C. G. Stillman, Peter Moro.

Klapprott: Rainer (Special Final), 'Holly Lodge', 54 Abingdon Grove, Northampton. G. A. Crockett, Lieut.-General Sir John Brown, L. S. Stanley.

Laugharne: Francis Desmonde, B.A.(Sheffield) (Univ. of Sheffield: Dept. of Arch.), Broadway Park Hotel, Sandown, Isle of Wight. Prof. Stephen Welsh, H. B. Leighton, H. B. S. Gibbs.

Leitch: George, D.A.(Dundee) (Dundee Coll. of Art: Sch. of Arch.), Needle Street, Kettlebridge, Kingskettle, Fife, Scotland. John Needham, W. S. Gauldie, T. H. Thoms.

McCrae: Colin Herbert Ritchie, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 38 The Ridgeway, Stanmore, Middlesex. Applying for nomination by the Council under Bye-law 3(*d*).

Macdonald: Ronald Yule, Dip.Arch.(Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll), 187 Hilton Avenue, Aberdeen. E. F. Davies, G. A. Mitchell, J. G. Marr.

Mann: (Miss) Pamela Burnip, B.A.(Arch.) (Sheffield) (Univ. of Sheffield: Dept. of Arch.), 76 Swannington Street, Burton-on-Trent, Staffs. Prof. Stephen Welsh, H. B. Leighton, F. G. Goodin.

Martin: Derrick Robert John (Final), 113 South Lodge Drive, Southgate, N.14. Frederick Gibberd, A. E. Kelsey, S. F. Burley.

Meehan: Kenneth Joseph Christopher (Special Final), 75 Alderney Road, Slade Green, Kent. T. E. Scott, C. G. Bath, S. F. Burley.

Miles: George Frederick (Special Final), 12 Forge Lane, Three Bridges, Crawley, Sussex. T. E. Scott, R. B. Craze, J. C. Clavering.

Millward: Robert Joseph, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.), Delph Cottage, Ashover, Nr. Chesterfield, Derbyshire. Prof. Stephen Welsh, H. B. Leighton, H. B. S. Gibbs.

Montague: Henry Thomas (Special Final), 24 Harley Street, W.1. Maurice Sanders, W. A. C. Ball, Eric Ambrose.

Munro: Hector Alexander (Special Final), 39 Marchmont Crescent, Edinburgh, 9. A. A. Foote, J. R. McKee, Frank Wood.

Nel: Cornelius Wilhelm (Passed a qualifying Exam. approved by the I.S.A.A.), c/o Messrs. Pite, Son and Fairweather, 6 Queen Anne's Gate, S.W.1. Applying for nomination by the Council under Bye-law 3(*d*).

Pavitt: John Heritage, B.A.(Arch) (Sheffield) (Univ. of Sheffield: Dept. of Arch.), 50 Vicar's Hill, Ladywell, S.E.13. Prof. Stephen Welsh, H. B. Leighton, H. H. Powell.

Pilling: Clifford James (Special Final), 3 The Close, Alwoodley, Leeds, 17. Hubert Bennett, A. W. Glover, N. H. Fowler.

Pilton: Ronald George Alfred (Special Final), 80 Strathyre Avenue, Norbury, S.W.16. C. G. Stillman, Ernest Seel, Eric Pettengell.

Poole: Geoffrey Peter Frederick (Final), 96 Eamont Court, St. John's Wood, N.W.8. J. S. Walkden, T. G. Jackson, W. H. Arend.

Ramsay: Peter Allan Beveridge (Special Final), 69, Crown Crescent, Peterculter, Aberdeenshire. E. F. Davies, A. B. Gardner, D. J. A. Ross.

Reidy: William Michael (Special Final), 7 Trafalgar Terrace, Monkstown, Co. Dublin, Ireland. J. V. Downes, Vincent Kelly, J. J. Robinson.

Rennie: James Newton (Final), 4 Burnside Terrace, Kilmacolm, Renfrewshire. F. R. Burnet, William Ross, W. A. P. Jack.

Ritchie: William Cruickshank (Special Final), 14 Great King Street, Edinburgh. R. F. Hutchison, T. W. Marwick, J. R. McKay.

Roberts: David (Final), 'Marino', North Road, Caernarvon. Hubert Bennett, W. H. King, N. H. Fowler.

Robinson: John Wilson (Final), 88 Mount View Road, Hornsey, N.4. Arthur Korn, G. R. Dawbarn, G. S. Rhodes.

Sadler: Alan James (Final), 51 Grange Road, Dorridge, Solihull, Warwickshire. A. Douglas Jones, T. M. Ashford and applying for nomination by the Council under Bye-law 3(*d*).

Sharpe: Dennis Michael Cripps (Final), 48 Stirling Road, Bournemouth, Hants. R. A. Phillips, M. G. Cross, A. E. Geens.

Simmonds: Douglas Claude (Special Final), 168 Junction Road, Tufnell Park, N.19. C. L. Gill, Prof. H. O. Corfiato, W. Mollison.

Smith: Charles Oliver, Dipl.Arch.(Leeds) (Leeds Sch. of Arch.), 11 Tranquility Avenue, Crossgates, Leeds, 15. F. Chippindale, D. A. Fowler, Victor Bain.

Smith: John Douglas (Final), 'Frangipani', Beaumont, Jersey, C.I. Kenneth Nealon, E. H. Button, F. L. Hannam.

Smith: John Elliott, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 2005 Paisley Road West, Cardonald, Glasgow, S.W.2. Applying for nomination by the Council under Bye-law 3(*d*).

Stephenson: Derek (Final), 4 Lonsdale Avenue, Seaview Road, Wallasey, Cheshire. Frederick Gibberd, Prof. R. Gardner-Medwin, Prof. L. B. Budden.

Stephenson: (Mrs.) Lilian Adelaide (*née* Durell) **(Final),** 28 Palace Court, W.2. Lord Mottistone, Richard Mellor, S. A. Farmer.

Stimpson: Anthony John (Final), 59A Abington Street, Northampton. Walter Rosser, A. N. Harris, P. J. J. Panter.

Surtees: John (Final), 98 Queens Crescent, Sunderland, Co. Durham. S. W. Milburn, W. E. Dow, G. R. Findlater.

Taylor: Ian, Dip.Arch.(Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 7 Dryburgh Gardens, Glasgow, N.W. E. F. Davies, G. F. Shanks, F. R. Wylie.

Tong: Peter (Final), 'Highpoint', Back Western Hill, Durham City. R. Jelinek-Karl, Dale Cuthbertson, G. R. Clayton.

Walters: Frank Richard, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), 260 Warstones Road, Penn, Wolverhampton, Staffs. A. Douglas Jones, T. M. Ashford, Reginald Edmonds.

Williams: Elwyn Thomas (Final), 15 St. Brigid Road, Heath, Cardiff, South Wales. L. R. Gower, Lewis John, Dr. T. A. Lloyd.

Williams: Watcyn (Final), 34 Mill Street, Kingston-upon-Thames, Surrey. Eric Lyons, Edwin Rice, Dr. R. Herz.

Winther: Peter William Vernon, A.R.I.C.S. (Special Final), 74 Ebury Mews East, Chester Square, S.W.1. Raglan Squire, L. G. Creed, Jack Howe.

Worthington: Brian (Special Final), 13 Fortescue Road, Cambridge. L. J. Gomme, H. C. Hughes, Wilfrid Wingate.

AS LICENTIATES (38)

Aiano: Leonard George Mackleden, Civil Engineer-in-Chief's Dept., Admiralty, H.M. Naval Base, Portland; 9 Carlton Road North, Weymouth, Dorset. E. E. Pettengell, E. C. Davies, S. N. Cooke.

Binks: Albert, Town Hall Buildings, Queen Street, Morley, Yorks.; 'Fairways', Scotchman Lane, Morley. J. Smith and the President and Hon. Secretary of the West Yorkshire Society of Architects under Bye-law 3(*a*).

Birkett: Arthur Norman, c/o City Engineer's Office, 18 Fisher Street, Carlisle; 'Ridgemount', 202 Newton Road, Carlisle. J. H. Haughan, Stephen Mann, C. B. Martindale.

Browne: Gerald, c/o The County Architect, Somerset County Council, Park Street, Taunton; Quantock View, Bishops Hull, Taunton, Somerset. R. O. Harris, E. C. Francis, C. G. Toy.

Carmichael: Hugh, Engineer, Surveyor and Architect, Banstead U.D.C., The Council House, Brighton Road, Banstead, Surrey; 'Lismore', Downs Wood, Epsom, Surrey. Ernest Frear and applying for nomination by the Council under Bye-law 3(*d*).

Dyke: Percy Charles, Borough Architect's Department, Town Hall, Barking, Essex; 40 Cambridge Road, Wanstead, E.11. C. C. Shaw, T. E. North and applying for nomination by the Council under Bye-law 3(*d*).

Ferguson: David, 17 Barns Street, Ayr, Scotland; 16 Chalmers Road, Ayr. G. Steel, J. A. Carrick, R. G. Lindsay.

Ferguson: Robert, B.A., B.E., Messrs. R. Ferguson and S. McIlveen, 15 College Gardens, Belfast; 'Mulroy', The Green, Dunmurry, Co. Antrim. R. H. Gibson and the President and Hon. Secretary of the Royal Society of Ulster Architects under Bye-law 3(*a*).

Fielding: James, c/o Benjamin Waterhouse, Esq., 134 Deansgate, Manchester 3; 32 College Avenue, Oldham. Benjamin Waterhouse, L. C. Howitt, H. H. Smith.

Frost: George, City Architect's Office, Town Hall, Manchester 2; 12 Brentbridge Road, Fallowfield, Manchester 14. Edgar Sutcliffe, L. C. Howitt and applying for nomination by the Council under Bye-law 3(*d*).

Fulton: James Paton, c/o Renfrew County Council, Back Sneddon Street, Paisley; 15 Tassie Street, Glasgow, S.1. T. J. Beveridge, Prof. W. J. Smith, J. A. Coia.

Hammick: Roger William, T.D., 10 Princess Square, Plymouth; Kingston Lodge, Mannamead, Plymouth. E. U. Channon, F. H. Allen, H. J. Hammick.

Hodgess: Claude Hamilton, Architect's Department, County Hall, Truro, Cornwall; 22 Hillcrest Avenue, Higher Town, Truro. J. H. Crowther, A. J. Cornelius, R. F. Wheatly.

Horner: Gordon Stuart, 6 Lombard Street, East, Dublin; 'Compton', Dalkey Avenue, Dalkey, Co. Dublin. Vincent Kelly and the President and Hon. Secretary of the Royal Institute of the Architects of Ireland under Bye-law 3(*a*).

Hoyle: Joseph Edwin, Ministry of Works, Leeds; 34 The Rise, Northowram, near Halifax. Norman Culley, C. Sunderland and applying for nomination by the Council under Bye-law 3(*d*).

Johnstone Hogg: Henry Bewick, R.E. Office, Kempston Barracks, Bedford; 1 Park Avenue, Bedford. F. C. Saxon, F. H. Brown and applying for nomination by the Council under Bye-law 3(*d*).

Leith: Jack, 28 High Street, Tadcaster, Yorks; Crown Cottage, Boston Spa, Yorks. N. H. Fowler, W. A. Ledgard, W. H. King.

Low: George, c/o Messrs. Wylie, Shanks and Wylie, 12 Clairmont Gardens, Glasgow, C.3; 78 Rosslyn Avenue, Rutherglen. F. R. Wylie, Walter Underwood, L. W. Hutson.

McIlveen: Samuel, 15 College Gardens, Belfast; Killaney Lodge, Boardmills, Lisburn, Co. Down. R. H. Gibson and the President and Hon. Secretary of the Royal Society of Ulster Architects under Bye-law 3(*a*).

Matthews: Victor John, Priory Chambers, 16 Church Street, Christchurch; 'Muhuhu' Hursley Close, Boscombe East, Bournemouth. Philip Hardy, L. M. Austin, W. J. Mountain.

Meacher: Reginald John, Council Offices, Dover Road, Sandwich, Kent; 'Anglia', St. Georges Lees, Sandwich. C. J. F. Martindale, H. C. Ashenden, Anthony Swaine.

Phelps: Basil L., F.R.I.C.S., 85 High Street, Shanklin; Chine Lodge, Shanklin. Vernon Aldridge, H. V. Lobb, V. G. Cogswell.

Pritchard: Thomas, Westminster Buildings, Newgate Street, Chester; Larne, Quarry Lane, Kelsall, near Chester. M. H. Forward, Bertram Ashworth, F. C. Saxon.

Reside: Gerald Wilson, M.B.E., E.R.D., J.P., B.Sc., Margaret Square, Newry, N. Ireland; Killowen Cottage, Killowen, Co. Down. R. H. Gibson and the President and Hon. Secretary of the Royal Society of Ulster Architects under Bye-law 3(*a*).

Richards: Owen Wyn, c/o Town Hall, Beckenham; 2 Cranleigh House, 6 Overbury Avenue, Beckenham. H. W. Parnacott, L. A. Culliford, A. E. Westerman.

Rogerson: George, Borough Engineer and Surveyor's Department, Town Hall, Blackburn, Lancs.; 44 Tarbert Crescent, Shadsworth, Blackburn. F. W. Tempest, L. G. Hannaford, C. J. Tomkins.

Slater: Robert, Borough Architect's Department, Town Hall, Stockport, Cheshire; 20 Sidmouth Street, Audenshaw, near Manchester. Applying for nomination by the Council under Bye-law 3(*d*).

Smith: Victor, Senior Assistant Architect, Blackburn Corporation, Town Hall, Blackburn; 40 Willow Tree Drive, Blackburn. Applying for nomination by the Council under Bye-law 3(*d*).

Snowball: Robert Henry, A.R.I.C.S., Borough Surveyor and Architect, Town Hall, Rawtenstall, Rossendale, Lancs.; 117 Newchurch Road, Rawtenstall. S. M. Richmond, Arthur Brocklehurst, Samuel Taylor.

Stevenson: John Vallance, 17 Barns Street, Ayr; 'Errolston', 107 Bentinck Drive, Troon. G. Steel, J. A. Carrick, R. G. Lindsay.

Surtees: John, c/o W. Stockdale, Esq. [*F*], 73 Howard Street, North Shields; 26 Hastings Avenue, Whitley Bay. William Stockdale, G. H. Gray, Lieut.-Col. A. K. Tasker.

Thornhill: William, F.R.I.C.S., Congleton Road, Sandbach, Cheshire; 65 Edleston Road, Crewe. Applying for nomination by the Council under Bye-law 3(*d*).

Truman: **Harry** (Junr.), M.B.E., Upper King Street House, Upper King Street, Norwich; 'Heathcote', Station Road, Salhouse, Norwich. E. W. B. Scott, R. O. Bond, T. F. Trower.

Turner: **Max Duncan,** 4 King Street, Wakefield; High Street, Denby Dale, near Huddersfield; The Bungalow, Marsh Road, Shepley, near Huddersfield. Norman Culley, R. H. Winder, J. G. Berry.

Vigor: **Jack Stanley,** Ministry of Works, Government Buildings, Warwick Road South, Manchester 16; 10 Stratton Road, Manchester 16. Applying for nomination by the Council under Bye-law 3(*d*).

Whitaker: **Charles William,** c/o Cecil H. Crowther, Esq., 116 Albion Street, Leeds 2; 34 Carr Manor View, Leeds 17. R. H. Winder, W. F. Dawson, W. H. King.

Wigley: **William Richard de Winton,** Borough Engineer's Office, Harrogate, Yorks; 78 Forest Lane, Harrogate. A. G. Chant, C. W. McIntosh, T. S. Davies.

Wilson: **John,** Westfield, Westfield Road, Ayr; 89 St. Quivox Road, Prestwick, Ayrshire. G. Steel, J. A. Carrick, R. G. Lindsay.

ELECTION: OCTOBER 1956

An election of candidates for membership will take place in October 1956. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Wednesday 15 August 1956.

The names following the applicant's address are those of his proposers.

AS FELLOW (1)

Quelch: **Henry Darro** [*A* 1949], The Rhodarc Group, 'St. Andrews House', 32 Jameson Avenue, Salisbury, Southern Rhodesia; 'Almanzora', 542 Queen Elizabeth Road, Greendale, Salisbury. A. V. Montagu, J. R. Anderson, J. A. Richardson.

AS ASSOCIATES (14)

Allen: **Denis John Wigram,** A.S.T.C. (Arch.) (Passed a qualifying Exam. approved by the R.A.I.A.), 44 Margaret Street, N.S.W., Australia. J. L. S. Mansfield, J. C. Fowell, S. G. Thorp.

Arthur: **John Sinclair** (Passed a qualifying Exam. approved by the N.Z.I.A.), 116 Wai-iti Road, Timaru, New Zealand. M. K. Draffin and the President and Hon. Secretary of the N.Z.I.A. under Bye-law 3(*a*).

Bate: **Richard Cyril Kingsley Haigh Trail** (Passed a qualifying Exam. approved by the I.S.A.A.), 17 New Africa House, Union Avenue, Salisbury, Southern Rhodesia. Prof. L. W. T. White and applying for nomination by the Council under Bye-law 3(*d*).

Chibber: **Tilak Raj,** Dip.Arch.(Melbourne) (Passed a qualifying Exam. approved by the R.A.I.A.), 1–E/4 Patel Road, Patel Nagar, Delhi—12, India. Harry Winbush, R. S. Demaine, W. P. R. Godfrey.

Crosby: **Martin Prynne,** B.Arch.(Rand) (Passed a qualifying Exam. approved by the I.S.A.A.), 37 Fort Street, Birnam, Johannesburg, S. Africa. Applying for nomination by the Council under Bye-law 3(*d*).

France: **Alfred Victor** (Special Final), Public Works Department, Fort Street, Georgetown, British Guiana. G. A. Crockett, E. M. Fry, Dr. R. Herz.

Fraser: **Donald Edmund,** B.Arch.(C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.), P.O. Box 272, Salisbury, Southern Rhodesia. Professor L. W. T. White and applying for nomination by the Council under Bye-law 3(*d*).

Horwitz: **Edwin,** B.A.Arch.(C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.), 305–7 Alris Building, 3 Rissik Street, Johannesburg, S. Africa. Prof. L. W. T. White and applying for nomination by the Council under Bye-law 3(*d*).

Jack: **Russell Callam,** A.S.T.C. (Arch.) (Passed a qualifying Exam. approved by the R.A.I.A.), 44 Margaret Street, Sydney, N.S.W., Australia. Prof. F. E. Towndrow, Prof. H. I. Ashworth, Cobden Parkes.

Kwok: **Stanley Tun-li,** A.A.Dipl. (Arch.Assoc. (London): Sch. of Arch.), 14 Embassy Court, Hysan Avenue, Hong Kong. E. B. Cumine, Prof. R. G. Brown, W. W. C. Shewan.

Moy: **Peter Roy,** Dipl.Arch.(Northern Polytechnic) (Northern Poly.(London): Dept. of Arch.), 2046 Honeywell Avenue, Box 96 Woodroffe P.O., Ottawa, Ontario, Canada. T. E. Scott, Elie Mayorcas and applying for nomination by the Council under Bye-law 3(*d*).

Wilson: **Blair Mansfield,** B.Arch.(Queensland) (Passed a qualifying Exam. approved by the R.A.I.A.), 10 Hiron Street, St. Lucia, Brisbane, Queensland, Australia. R. P. Cummings, E. L. Gale, E. A. Day.

Woolley: **Kenneth Frank Charles,** B.Arch. (Sydney) (Passed a qualifying Exam. approved by the R.A.I.A.), 109 Bunnerong Road, Kingsford, Sydney, N.S.W., Australia. Prof. H. I. Ashworth, Cobden Parkes, W. R. Laurie.

Yetton: **Douglas Roy,** B.Arch.(Rand) (Passed a qualifying Exam. approved by the I.S.A.A.), Rhoanglo Mine Services, Box 172, Kitwe, Northern Rhodesia. Applying for nomination by the Council under Bye-law 3(*d*).

Notes from the Minutes of the Council

MEETING HELD 10 APRIL 1956

Appointments. (*a*) *R.I.B.A. Architecture Bronze Medal, the Western Australian Chapter, R.A.I.A.: R.I.B.A. Representative to serve on the Jury:* K. C. Duncan [*F*], President of the Western Australian Chapter, R.A.I.A. (*b*) *B.S.I. Committee—PLC/21—P.V.C. Flooring:* R.I.B.A. representative—R. A. Cooksey [*F*]. (*c*) *Annual Meeting of the General Council of Registered Plumbers' Association:* R.I.B.A. representative—Colin H. Murray [*F*].

The Royal Scottish Academy. The Council's congratulations were accorded to Mr. A. Esme Gordon [*F*] on his election as an Associate of the Royal Scottish Academy.

Exeter University Court of Governors. The Secretary reported that the representation of the Royal Institute on the Court of Governors of Exeter University would be continued on the reconstitution of University College, Exeter, as Exeter University.

Housing Subsidies Bill. With the consent of the Minister of Housing and Local Government, it was agreed to publish correspondence which had passed between the Ministry and the Royal Institute in regard to the discrimination between fit and unfit houses for subsidy in clearance areas under the new Bill.

Architectural Students and National Service. A memorandum on National Service was approved for publication.

Architectural Association Lantern Slide Collection. It was reported that the Architectural Association were beginning on the development of a collection of 2 in. slides and it was agreed to make a grant of £200 per annum for five years towards the cost of this development.

Completion of Premises. The Council gave formal approval to entering into a contract with Messrs. Ashby and Horner for the rebuilding of No. 68 Portland Place and for this operation to begin in July 1956. The Council also gave approval in principle to a proposal to extend the operation to completing the two top storeys of No. 66 Portland Place. The architects, Messrs. Playne and Lacey, were instructed to proceed with the plans for this latter project.

The Secretary reported that a donation of three guineas to the Completion of Premises fund had been received from Messrs. Lubynski, Leeb and Ritchie-Fallon [*AA*], Cape Town. The Council expressed their appreciation of this gift.

Architects' Sign Boards. On the recommendation of the Public Relations Committee, the Council gave approval to a standardised sign board to bear architects' names and addresses and the R.I.B.A. badge, in connection with building sites where a member of the Royal Institute was designing a building. The boards are to be of standardised design and will be obtainable direct from suppliers approved by the Royal Institute.

Membership. The following members were elected: as Fellows 57; as Associates 79; as Licentiates 43.

Students. 29 Probationers were elected as Students.

Applications for Reinstatement. The following applications were approved: as Fellows, Kenneth Patrick James Courtney-Dyer, William Begg Simpson; as Associate, Hugh Percival Illsley; as Licentiate, Harold Alexander.

Resignations. The following resignations were accepted with regret: David Cornwall Grubbe [*A*], Robert Charles Southwood [*A*], Cecil Thomas George Ducret [*L*], John Wiltshaw Popplewell [*L*].

Applications for Transfer to Retired Members' Class under Bye-law 15. The following applications were approved: as Retired Fellows: Arthur Graham Smith, Robert Percival Sterling Twizell, Frank Hugh Walker; as Retired Licentiate: Douglas William Cooper.

Obituary. The Secretary reported with regret the death of the following members: The Right Hon. The Earl of Bessborough, G.C.M.G. [*Hon. F*], Professor Claude Batley [*F*], Robert Hargreaves Cunliffe [*F*], Hans Sigmund Jaretzki [*F*], David Gordon McIntosh [*F*], Rudolph Arthur Landstein [*Retd. F.*], Francis Augustus Richards [*Retd. F.*], John Stuart [*Retd. F.*], George Edward Tonge [*Retd. F.*], Arthur Reginald Brenchley [*A*], Haydn Albert Edward Halstead [*A*], Reginald Herbert Jubb [*A*], Grahame Kenneth Porter [*A*], Frederick Rowland Pullan [*A*], Lloyd F. Ward [*A*], Bertram Drummond [*Retd. A.*], John James Blake [*L*], Roland Arthur Cornell [*L*], Donald St. Aubyn Hamilton [*L*], Arthur George Percy Kent [*L*], Hamilton More Nisbett [*L*].

By resolution of the Council the sympathy and condolences of the Royal Institute have been conveyed to their relatives.

Members' Column

This column is reserved for notices of changes of address, partnership and partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained

APPOINTMENTS

Mr. P. M. Bone [*A*] has been appointed Tyrone County Education Architect as from 1 August 1956.

Mr. D. J. Oakley [*A*] has taken an appointment as Senior Architect to the Government of Jamaica. His address and that of Mrs. D. M. Oakley [*A*] is now c/o Town Planning Department, 140 Maxfield Avenue, Half-Way-Tree, Jamaica, B.W.I.

Mr. Owen N. Roberts, M.T.P.I. [*A*], has resigned from the post of Senior Planner in the Chief Architect's Department of Stevenage Development Corporation and as from 1 May has taken up the appointment of Senior Group Architect in the Architectural and Planning Department of Coventry Corporation.

PRACTICES AND PARTNERSHIPS

Mr. John N. Barratt [*A*] has begun practice at 24 Bell Road, Walsall, where he will be pleased to receive trade catalogues, etc.

Mrs. M. J. Cooper [*A*] has begun private practice at Hartswood Cottage, Hartswood Road, Brentwood, Essex, and will be pleased to receive the usual trade journals, catalogues, etc.

Mr. Geoffrey Copcutt [*A*] has taken into partnership Mr. Thomas Reeves Hancock and Mr. John Yerrow Hawkes. The practice will continue under the title of **Copcutt, Hancock and Associates** from 1 St. Martin's, Leicester (Telephone 58098), where they will be pleased to receive trade catalogues. Mr. Copcutt's private address is now 76 New Walk, Leicester (Granby 3124).

Following the retirement of Mr. Herbert Kenchington [*F*] from the firm of Kenchington & Farms, the firm will now be known as **Farms and Partners** [*AA*]. The practice will be continued at 130 Crawford Street, London, W.1 (WELbeck 6543/4).

The partnership between **Mr. Douglas Hall** [*F*] and **Mr. Bertram T. Howells** [*F*] has been dissolved by mutual consent. Mr. Hall will continue to practise in Shrewsbury under the title of **Richard and Douglas Hall.** Mr. Howells will continue to practise at Bangor, North Wales, under the title of **Howells and Doherty.**

Mr. Gordon McKnight [*A*] is now practising at 35 May Street, Belfast (Belfast 22302), and will be pleased to receive trade catalogues, etc.

Mr. Michael G. Murray [*A*] has become a partner in the firm of **Hening and Chitty** [*F*] practising at 20 Gower Street, W.C.1.

Mr. G. Clayton Smith [*A*] has taken into partnership **Mr. W. Ormondroyd** [*A*] and the practice will continue at Burleigh House, High Street, Newmarket (Newmarket 2393), under the style of **G. Clayton Smith.**

Mr. Kenneth Wakeford [*F*], **Mr. Charles Jerram** [*F*] and **Mr. Cecil Harris** [*L*] have changed the style of their firm from Donald Hamilton, Wakeford and Partners to **Kenneth Wakeford, Jerram and Harris.** The practice is being continued from 7 Connaught Place, London, W.2, with a branch office at 3 Upper Berkeley Place, Bristol 8.

Mr. D. T. Walters [*L*] has left the War Department R.E. Works Services to begin practice at 204 H.K. and Shanghai Bank Building, Hong Kong, and will be pleased to receive trade catalogues, etc.

Messrs. Ronald Ward and Partners (Ronald Ward [*F*], D. H. Marriott [*A*], L. P. Worby [*A*], D. L. Robinson [*A*] and A. H. Walker [*A*]) of 29 Chesham Place, Belgrave Square, London, S.W.1, have taken into partnership **Mr. Clifford J. Newbold** [*A*], who will be primarily responsible for the West African section of the practice.

Mr. R. G. Wilde [*A*] has with effect from 31 March dissolved partnership with Mr. David Myles [*A*]. He is continuing to practise under the style of **Ronald Wilde** in Bulawayo, Southern Rhodesia, but has removed his offices to Sterling House, Abercorn Street, retaining P.O. Box 1502, Bulawayo.

Mr. Victor Wilkins [*F*] and **Mr. W. H. Brant** [*L*] have taken into partnership **Mr. Anthony Cook** [*A*]. The practice, formerly known as Victor Wilkins, will continue at 12 York Buildings, Adelphi, London, W.C.2, under the style **Victor Wilkins and Partners.**

CHANGES OF ADDRESS

Mr. Herbert J. Axten [*F*] recently changed his address to 17 Mountfield, Mountfield Gardens, Tunbridge Wells, Kent (Tunbridge Wells 1279). In the announcement of this change made in the Members' Column of the April JOURNAL Mr. Axten's name was given in error as Austen.

Mr. F. John Bancroft [*A*] has changed his address to 'Struan', Highland Road, Haywards Heath, Sussex.

Mr. G. A. Bethell [*A*] has changed his address to 350 Glossop Road, Sheffield, 10 (Sheffield 22863).

Mr. L. E. G. Hunt [*F*] has changed his address to 10 and 12 Cathedral Street, Norwich. The telephone number remains the same (Norwich 26624).

Mr. Robert J. Juster [*A*] has changed his address to 562 West Shadowlawn Drive, Apartment 4, Chattanooga, Tennessee, U.S.A., having being appointed Planner to the Chattanooga-Hamilton County Planning Commission, Tennessee.

Mr. M. K. Levy [*A*] has changed his address to 11 Steynings Way, Woodside Park, London, N.12.

Mr. Richard Lopacki [*A*] has changed his address to 12345 Gallagher Avenue, Detroit 12, Michigan, U.S.A.

Mr. Ian A. Mackenzie [*A*] has moved his office to Kempfield Court, Dingwall, Ross-shire.

Mr. John Powell [*A*] has changed his address to 1 Laburnum Road, Humberstone, Leicester.

Mr. Peter Prangnell [*A*] has changed his address to 'Stacks Cottage', Mill Road, Blue Bell Hill, nr. Rochester, Kent (Blue Bell Hill 311), and will be pleased to receive trade catalogues, etc.

Mr. Donald A. Rummery [*A*] has changed his address to 'Kyrenia', Wiltshire Avenue, Crowthorne, Berks.

Messrs. Selvaratnam and Monk [*AA*] have moved their offices to The Mercantile Bank Building, 14 Queen Street, Colombo I, Ceylon, where trade literature, etc., should be sent.

Mr. Clive B. Thompson [*A*] has changed his address to 203 Lennard Road, Beckenham, Kent.

The address of **Mr. Bernard Turner-Davies** [*A*] is now City of Toronto Planning Board, 414 Bay Street, Toronto, Ontario, Canada.

Mr. G. M. Vickers [*A*] has moved from his E.C.3 office to 54 Bloomsbury Street, Bedford Square, London, W.C.1, where he will be pleased to receive trade catalogues.

Mr. R. D. Whitestone [*A*] has moved to Eldborough Stables, Cudnall Street, Charlton Kings, Cheltenham.

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Fellow at present in practice desires to obtain an interest or whole practice to add to interest. Preferably in south or west of England or Lake District. Box 25, c/o Secretary, R.I.B.A.

Fellow (43) dissolving small partnership in London by mutual consent requires small practice or partnership in south-east London. Box 30, c/o Secretary, R.I.B.A.

Associate (37), sound experience United Kingdom and overseas, capable contract management, seeks partnership in established practice at home or abroad. Capital available. Box 34, c/o Secretary, R.I.B.A.

Expanding practice in Surrey requires young and able but experienced architect with view to partnership. Must be able to take charge of jobs and part control of office if necessary. Box 35, c/o Secretary, R.I.B.A.

Manchester architect requires immediately assistant with view to partnership. Exceptional opportunity for young man with existing connections. Box 36, c/o Secretary, R.I.B.A.

Associate seeks junior partnership or position leading thereto in London area. Single, own car, capital available. Box 37, c/o Secretary, R.I.B.A.

Associate, M.A.(Cantab.), 34, with good experience, including industrial work in well-known London offices, is prepared to move to provinces if partnership in suitable practice offered. Capital available if required. Box 38, c/o Secretary, R.I.B.A.

WANTED AND FOR SALE

Wanted. Second-hand double elephant plan chest. Box 31, c/o Secretary, R.I.B.A.

Wanted. Second-hand adjustable metal stand suitable for fixing to double elephant drawing board. Also Anglepoise lamp (screw-down type). Please state prices. Box 33, c/o Secretary, R.I.B.A.

For sale. A number of drawing boards and tee-squares (antiquarian, double elephant, imperial and half-imperial), quantity of cartridge paper, tracing paper and blue linen. Box 32, c/o Secretary, R.I.B.A.

For sale. Architect's 18th century mahogany adjustable drawing table/desk in good condition, £25. Box 39, c/o Secretary, R.I.B.A.

For sale by the Architects' Benevolent Society on behalf of an architect's widow. Two vertical type print chests, mahogany, well made. One 38 in. by 30 in. by 8½ in., £7 10s. One 40 in. by 29 in. by 4½ in., £5. Can be seen at the A.B.S. offices, 66 Portland Place, W.1.

ACCOMMODATION

Architect has to let one office in ground floor suite, Gray's Inn district. Telephone available. Box 40, c/o Secretary, R.I.B.A.

The Royal Institute of British Architects, as a body, is not responsible for statements made or opinions expressed in the JOURNAL.